

BRANDEIS UNIVERSITY BULLETIN

1982-83 GRADUATE SCHOOL OF
ARTS AND SCIENCES



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1982-83

AUGUST 31, 1982

Rockland County Chapter

Brandeis University Libraries

In Memory of

ROSE GRINGER

Given by

Pearl and Lou Grunin

May 1991

Brandeis University

National Women's Committee



It is the policy of
basis of race, colo

The University operates under an affirmative action plan and encourages minorities and women to apply. Inquiries concerning discrimination under Title IX of the Educational Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973 may be referred to the Assistant to the President for Affirmative Action, Irving Enclave, Room 118, Brandeis University and/or to the Director, Office for Civil Rights, U.S. Department of Education, Washington, D.C.

Programs, requirements, fees and other information are set forth herein as they exist at the date of this publication. Brandeis University reserves the right to make changes without notice.

Brandeis University

**The
Graduate School
of Arts and
Sciences
1982-83**

Waltham, Massachusetts

XXXIII, No.2, August, 1982

The Brandeis University Bulletin (ISSN 0274-9653) is published four times a year, twice in August and once each in September and March by Brandeis University, 415 South Street, Waltham, Massachusetts 02254. Entered as second class matter at the Post Office at Boston, Massachusetts.
POSTMASTER: Send address changes to Brandeis University Bulletin, 415 South St., Waltham, Mass. 02254.

"It must always be rich in goals and ideals, seemingly attainable but beyond immediate reach . . .

"It must become truly a seat of learning where research is pursued, books written, and the creative instinct is aroused, encouraged, and developed in its faculty and students.

"It must ever be mindful that education is a precious treasure transmitted — a sacred trust to be held, used, and enjoyed, and if possible strengthened, then passed on to others upon the same trust."

LOUIS DEMBITZ BRANDEIS (1856-1941)
on the goals of a university



"Brandeis will be an institution of quality, where the integrity of learning, of research, of writing, of teaching, will not be compromised . . . It will be a dwelling place of permanent values — those few unchanging values of beauty, of righteousness, of freedom, which man has ever sought to attain . . . It will offer its opportunities of learning to all."

ABRAM L. SACHAR, Brandeis' first president
at ceremonies inaugurating the University, October 7, 1948

"If we want Brandeis University in its second quarter century to be a university of academic distinction, faithful to the highest ideals of free inquiry, committed without compromise to the discovery, preservation and transmission of knowledge, and increasingly skilled in enriching the learning experiences of all of its students, we can do it."

MARVER H. BERNSTEIN, President, Brandeis University
inaugural address, October 5, 1972

Table of Contents

Brandeis University	7
Graduate School of Arts and Sciences	8
Libraries	9
Admission	14
Foreign Students	16
Requirements for the Degree	17
Academic Regulations	20
Fees and Expenses	25
Financial Assistance	27
Academic Schools and Institutes	29
Areas of Study and Courses	33
University Organization	145
Board of Trustees	147
Offices of the University	148
Officers of Instruction	152
Index	166

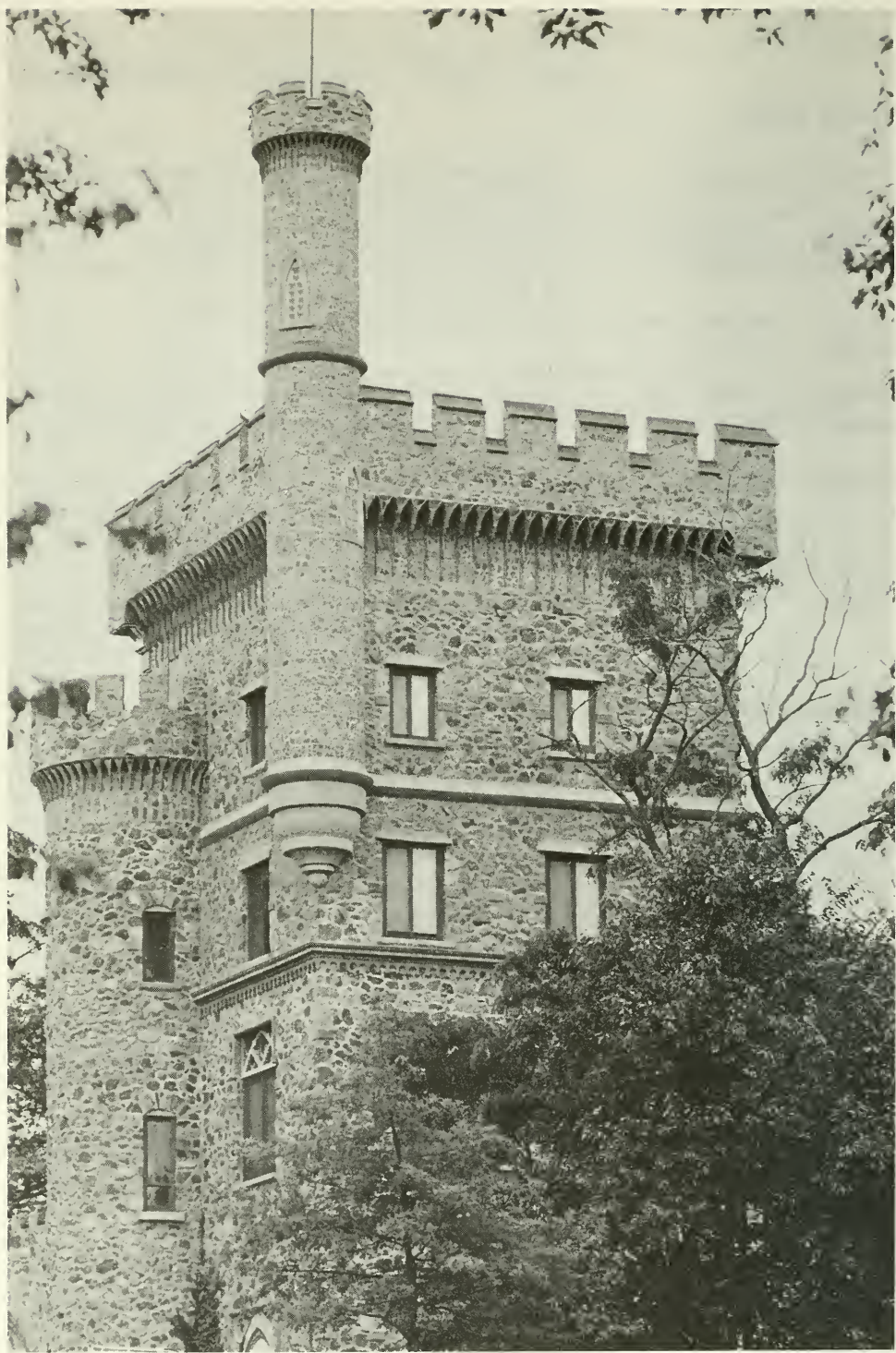
Academic Calendar 1982-1983

Fall Term

Wednesday	September 1	Returning students register. Fees are payable in full at this time. Students who register later will be fined \$10.
Thursday	September 2	New students register. Fees are payable in full at this time. Students who register later will be fined \$10.
Friday	September 3	Sectioning.
Monday	September 6	No University Exercises.
Tuesday	September 7	Opening day of instruction in courses.
Wednesday	September 15	Brandeis Friday. Friday class schedule is in effect.
Friday	September 17	No University Exercises.
Tuesday	September 21	Final day for filing Study Cards. No program changes for Fall Term may be made after this date.
Monday	September 27	No University Exercises.
Tuesday	September 28	Brandeis Monday. Monday class schedule is in effect.
Thursday	November 25 and	No University Exercises.
Friday	November 26	
Friday	December 10	Last day of instruction for Fall Term.
Wednesday through	December 15	Examination period. Winter Recess begins after last examination.
Tuesday	December 21	
Monday	January 3 (1983)	Fall Term grades due and Incompletes from Spring Term 1982. Final day for faculty certification that February master's candidates have completed degree requirements, including language(s) and theses, and that Ph.D. candidates have defended dissertations.
Friday	January 14	Final day for admission to candidacy and for completion of language requirements for students expecting to earn the Ph.D. in May 1983.

Spring Term

Wednesday	January 19	Registration for students entering Spring Term. Registration procedure begins for returning students.
Thursday	January 20	Opening day of instruction in courses.
Wednesday	February 2	Final day for filing Study Cards. No program changes may be made after this day.
Friday	February 18 and	No University Exercises.
Monday	February 21	
Thursday	February 24	Brandeis Monday. Monday class schedule is in effect.
Monday	March 1	Final day for filing Application for Financial Aid for 1983-84.
Monday	March 8	Last day for May degree candidates to submit drafts of theses and dissertations to department chairs and to file Application for Degree with Graduate School Office.
Friday	March 25	Spring Recess begins after last class.
Friday	April 1	Final day for master's candidates to complete foreign language requirement(s) for May degree. Final day for completion of language requirements for students expecting to earn the Ph.D. in February 1984.
Wednesday	April 6	Classes resume.
Wednesday	April 20	Final day for faculty certification that May Ph.D. candidates have defended dissertations. Final day for May degree candidates to discharge any financial indebtedness to the University.
Tuesday	May 3	Last day of instruction.
Friday	May 6	Final day for deposit of Ph.D. dissertations at the Graduate School Office by May degree candidates.
Friday	May 6	Final examinations.
through		
Thursday	May 12	
Monday	May 16	Grades due for all degree candidates no later than 10 a.m. Final day for faculty certification that master's candidates theses have been accepted.
Sunday	May 22	Commencement.
Tuesday	May 24	All Spring Term grades due and Incompletes from Fall Term 1982.



Brandeis University

Founded in 1948, amidst the post-World War II explosion of knowledge, Brandeis University literally began at the beginning — at the edge of an educational frontier — but is regarded today as one of the finest small, private research universities in the United States.

Named for the illustrious Supreme Court Justice Louis Dembitz Brandeis, whose far-reaching social vision advanced the welfare of his country, Brandeis is the only Jewish-sponsored, nonsectarian institution of higher learning in America. It is built on the faith in our basic heritage in the humanities, the sciences, the social sciences and the creative arts.

An unswerving commitment to excellence earned early recognition for the young university. Brandeis achieved accreditation in the shortest possible time (1953), and received Phi Beta Kappa recognition just 13 years after it was founded — the youngest institution so honored in over 100 years. The Ford Foundation, assessing the Brandeis record, buttressed its belief in the Brandeis potential during the 1960s with two major challenge grants for academic excellence — an accolade accorded to only five universities in the nation.

The giant multi-universities offer superb facilities and a faculty often too isolated by research from their students. Smaller institutions offer dedicated teachers who, for lack of time or facilities, have stopped doing research. The best of both models meet in only a handful of small schools in the United States. Brandeis is one of them.

Originally accredited in 1953 by the New England Association of Schools and Colleges, Brandeis was approved in 1977 for continuing membership in the Association for ten years, the maximum period available. Of the 2,000 accredited colleges and universities in the nation, about 100 are also known as “research centers.” Brandeis is among this select group. In a survey of professional school deans, the Florence Heller Graduate School for Advanced Studies in Social Welfare was recently ranked fourth in the country among schools of social work. Advanced Judaic studies at Brandeis was described as representing one of the best graduate programs in North America in a study at the Graduate Theological Union of Berkeley, Calif. that examined 75 American and Canadian programs. And the multi-million dollar Rosenstiel Basic Medical Sciences Research Center has attracted some of the top scientists in the world to probe into areas associated with the study of heart disease, immunology and cancer.

A Brandeis education encourages personal fulfillment, but only within the framework of social responsibility. Equipped by a liberal arts education, the individual sees reality as a whole with many intricately connected parts. That individual rejects the idea that there is only one truth, one perspective, one redeeming set of values. Study of the liberal arts is a time of inquiry, honest skepticism, and evolution of the intellect. Paradoxically, a liberal arts education — despite its lack of specialization — becomes sound preparation for a world that constantly makes old learning obsolete.

Brandeis, therefore, attaches prime importance to the liberal arts curriculum. It is designed to offer full academic opportunities for those students planning to pursue graduate or professional studies, as well as those whose educational objective is the baccalaureate degree.

For full information on the undergraduate curriculum, see the Bulletin of the College of Arts and Sciences.

The Graduate School of Arts and Sciences

History and Organization

The Graduate School of Arts and Sciences was formally established in 1953 when the University's Board of Trustees authorized graduate study in the Departments of Chemistry, Music, Psychology, and Near Eastern and Judaic Studies. The first Master of Arts degree was conferred in 1954; the first Master of Fine Arts degree in 1954; and the first Doctor of Philosophy degree in 1957.

The general direction of the Graduate School is vested in a Graduate Council of the Faculty composed of the President and the Dean of Faculty, *ex officio*; the Dean of the Graduate School; and one representative, usually the chairman, of each of the several University departments and committees offering graduate instruction. The members of the Graduate Council are appointed by the President on the recommendation of the Dean of the Graduate School. The functions of the Graduate Council, exercised in consonance with University policy, are to determine requirements for admission; to provide programs of study and examinations; to establish and maintain requirements for graduate degrees; to approve candidacy for degrees; to make recommendations for degrees; to make recommendations for new areas of graduate study; to lay down such regulations as may be considered necessary or expedient for governing the Graduate School; and to exercise a general supervision over its affairs. The Dean of the Graduate School is the chairman of the Graduate Council and the chief executive officer of the Graduate School.

Objectives

The underlying ideal of the Graduate School is to assemble a community of scholars, scientists, and artists, in whose company the student-scholar can pursue study and research as an apprentice. This objective is to be attained by individualizing programs of study, restricting the number of students accepted, maintaining continual contact between students and faculty, and fostering the intellectual potential of each student.

Degrees will be granted on the evidence of intellectual growth and development, rather than solely on the basis of formal course credits. Fulfillment of the minimum requirements cannot, therefore, be regarded as the sole requisite for degrees.

The Graduate School of Arts and Sciences is designed to educate broadly as it trains professionally. It offers courses of study leading to the master's and doctoral degrees.

Areas of Graduate Study

During the academic year 1982-83, graduate programs will be offered in the following areas:

- | | |
|--------------------------------------|---------------------------------------|
| 1. Anthropology | 11. Jewish Communal Service |
| 2. Biochemistry | 12. Joint Program of Literary Studies |
| 3. Biology | 13. Mathematics |
| 4. Photobiology | 14. Music |
| 5. Biophysics | 15. Near Eastern and Judaic Studies |
| 6. Chemistry | 16. Physics |
| 7. Classical and Oriental Studies | 17. Politics |
| 8. Comparative History | 18. Psychology |
| 9. English and American Literature | 19. Sociology |
| 10. History of American Civilization | 20. Theater Arts |

The Brandeis Libraries

The first Brandeis library in 1948 was the former stable for the veterinary and medical school that had previously occupied the site. It housed 2,000 books. Immediately, efforts were made to build the collection and provide modern facilities. The Jacob Goldfarb Library and the Rapaport Treasure Hall wing were built in 1959 and later expanded, and the Gerstenzang Science Library was completed in 1965. Today, the Brandeis libraries hold more than 850,000 volumes and 600,000 microtexts.

In the summer of 1981 the University embarked on a multi-million dollar expansion of the library system. This ambitious endeavor was undertaken to meet the study needs of the undergraduate and graduate student bodies, to increase space for the rapidly growing collections, to improve the delivery of services to library users, and to utilize the latest technological advances in computerization, miniaturization and audio-visuals. The program — to be completed next spring—includes construction of the new Leonard L. Farber Library, as well as expansion and renovation of the Goldfarb Library and the Rapaport Treasure Hall.

The five-level Farber Library, initiated by a gift from University Trustee Leonard L. Farber, will include an Undergraduate Study Center that features an undergraduate library and study facilities, the Norman and Rosita Winston Creative Arts Center that contains modern listening facilities and periodicals and books on fine arts and music, and the Carl and Ruth Shapiro Center for Library Technology and Journals that houses the University's extensive microfilm holdings and current periodical and newspaper collections. The Goldfarb Library expansion will provide an 18,000 square feet addition that will house the library's reference and circulation departments and eventually contain sophisticated video facilities. There also will be changes in traffic patterns, seating areas and resource materials designed to make the library a more comfortable place to study and conduct research. Renovations in the Rapaport Treasure Hall will enable the University to increase its holdings of primary research materials and rare and special collections, which include the Vito Volterra Center on the History of Science, the Leonardo da Vinci Collection, the Spanish Civil War Collection and the Alfred Dreyfus Case Collection.

An attractive and expansive plaza will link the three buildings of the new library complex, which has been designed by Abramovitz-Harris-Kingsland of New York. The central entrance to the complex will be from the plaza and will feature a foyer area designated in tribute to the University's National Women's Committee which, since the library's humble beginnings in that converted stable in 1948, has contributed about \$20 million in support of the Brandeis libraries.

In undertaking the new library complex, the University reaffirms its commitment to academic excellence and to educational facilities of the highest quality.

Rosenstiel Basic Medical Sciences Research Center

The Dorothy H. and Lewis S. Rosenstiel Basic Medical Sciences Research Center was made possible in 1968 through the gift of the late Lewis S. Rosenstiel, a Brandeis Fellow, as a memorial to his wife, Dorothy. The Center has established research programs in the basic medical sciences embracing work in biochemistry, biology, chemistry, microbiology, physics, biophysics and immunology. Staff members are jointly appointed to the Brandeis faculty basic science departments. The center invites participation of distinguished scholars and medical scientists, offers hospitality to younger researchers at the undergraduate and fellowship level, sponsors symposia and colloquia and underwrites scholarly publications.

The Basic Medical Sciences Research Center contains sophisticated scientific equipment and facilities. Through cooperative programming, both with departments at Brandeis and in the Boston area, the Center has broadened the scope of basic medical science research offerings at Brandeis. Grants from such agencies as the National Science Foundation, National Institutes of Health, and American Cancer Society, among others, support research programs in the Rosenstiel Center.

The Rosenstiel Center sponsors the annual presentation of the Lewis S. Rosenstiel Award, given to recognize distinguished work in basic medical research. Created in 1971 to also honor Mr. Rosenstiel, the award consists of a handsome bronze medallion and a stipend of \$10,000.

The Florence Heller Graduate School for Advanced Studies in Social Welfare

The Heller Graduate School, from its inception in 1959, has developed a multidisciplinary approach to the study of social policy issues. The faculty represents a broad spectrum of the social sciences and related social welfare professions and includes some of the nation's most respected experts in the major human services areas: gerontology, health policy and planning, long-term care, income maintenance, employment, mental health, developmental disabilities, alcohol abuse, family and children's services.

The Heller School offers both a master's degree in Human Services Management and a doctoral program in Social Welfare. The former prepares graduates for middle and upper-level management careers in the public, private, and non-profit sectors; the latter trains students for positions in policy, planning, administration and research.

Candidates for both programs are selected on the basis of their demonstrated scholastic achievements, the nature and extent of their professional experience, and the compatibility between their career goals and the Heller School's educational programs.

To receive the doctoral degree, a student must complete a minimum of 14 semester courses for those entering with a master's degree in a relevant area, and 18 for students not having an advanced degree. Doctoral candidates must satisfactorily complete a written qualifying examination, which tests students' mastery of the School's core curriculum. Additionally, each student must take an integrative policy analysis seminar and submit an acceptable doctoral dissertation.

Students seeking a master's in Human Services Management must complete at least twelve courses, including six required core courses, and a management laboratory project. Most students complete the program within a twelve-month, three-semester period, beginning in June and ending in May. Part-time studies are possible and a fifteen-month program is available for highly qualified candidates who have had limited professional experience.

The School conducts an active policy-oriented research program on a wide range of health and welfare issues. Four research centers anchor a variety of projects that are often interdis-

plinary in character and involve collaborative activity between faculty and advanced students. They are: The Center for Health Policy Analysis and Research, which conducts studies in three major health care areas — long-term care, health care quality and effectiveness, and regulation and reimbursement; The Levinson Policy Institute, which focuses on the long-term care needs of the elderly and disabled individuals and their families; The Center for Employment and Income Studies, which consolidates the research and training activities in the area of employment training and income maintenance; and The Center for Aging and Income Maintenance, which focuses on public and private income maintenance programs for the elderly.

In addition, a variety of research projects and training grants are carried out in the fields of family and children's services, mental health, developmental disabilities, and alcoholism.

The School was made possible by an initial endowment from the late Mrs. Florence G. Heller of Chicago and is housed in the Florence Heller Building complex, which includes The Benjamin Brown Research Building. These buildings contain classrooms, offices and research facilities.

Further information is available in the Bulletin of the Heller School. Applications may be obtained from the Heller School Office (617) 647-2944.

Graduate School Office

The Graduate School office is located in the Rabb Graduate Center. The office is open Monday through Friday from 9 A.M. to 5 P.M. All requests for information, catalogs and application forms should be addressed to the Dean of the Graduate School of Arts and Sciences, Brandeis University, Waltham, Massachusetts 02254.

Dining Facilities

Graduate students may sign meal contracts for varying numbers of meals or buy cash meal books. Arrangements for these contracts are made at the Food Director's Office in Kutz Dining Hall. A kosher kitchen also is maintained. Individual meals and light snacks may be purchased at Usdan Student Center.

Housing

Brandeis University has a limited number of apartment units available for single and married graduate students. All apartments are within easy walking distance of the campus. These include efficiency, one and two bedroom *unfurnished* apartments as well as efficiency and one bedroom *furnished* apartments. Single students may rent a space in an apartment and request Graduate Housing Office assign a roommate. The one bedroom apartments are particularly designed to allow use as two separate bedrooms with a common kitchen and bathroom. Early application for housing is encouraged.

Information, rental rates and copies of the housing contract may be obtained by writing to the Office of Residence Life and University Housing, Brandeis University, Waltham, Massachusetts 02254.

In addition, the Graduate Housing Office maintains Off-Campus Housing Services (OCHS). OCHS has extensive listings of available housing in the area, a list of realtors who may be helpful in a search for housing, and descriptions and information about nearby neighborhoods and towns. OCHS does not serve as a real estate agent, but rather as a resource to help in locating housing.

Office of International Programs

This office serves as the counseling center for students who come here from other countries. It advises students of special social and educational activities and provides assistance in fulfilling the legal procedures required by the U.S. Immigration Service to obtain working permits and documents necessary for extended periods of study, and in other technical matters which may arise (See page 16).

In addition, the office provides the Brandeis community with information on academic opportunities abroad such as Fulbright grants for graduate students and faculty, the Watson Fellowships and Rhodes Scholarships for seniors being graduated, the Abram L. Sachar International Fellowship Program, and the Jacob Hiatt Institute for study in Israel. American students wishing to study abroad on University-accredited programs should consult this office.

Health Services

Because health and medical care are an integral part of the University experience, the University Health Services provides a program of comprehensive medical and emotional care. An optional Health Participation Fee entitles students to medical services available at the Golding Medical Outpatient Facility and counseling services available at Mailman House without additional charge during the academic year. The annual health fee does not pay for off-campus medical consultations, dental care, medications, laboratory tests, drugs, x-rays, reusable supplies or admission to the University's hospital, Stoneman Infirmary, and students are responsible for these charges.

In addition, each student is required to have personal health insurance. The student may elect to participate in the Student Health Insurance Plan offered through the University, underwritten by the Boston Mutual Life Insurance Company, or may substitute membership in another plan.

Except for limited day care facilities, the Health Services and the use of the Stoneman Infirmary are available to students only during the period in which the University is in regular academic session.

Prospective students planning to matriculate in the college and graduate schools must submit a Health Examination Report completed by the family or personal physician prior to registration. In addition to information about previous health and details of the physical examination, evidence of immunization against tetanus, polio, measles, mumps and rubella are required. Since students may not register until the requirements have been satisfied, it is strongly recommended that the Health Examination Report be submitted by July 1.

The Student Health Insurance Plan is designed to defray expenses of those situations which are beyond the scope of the Health Services; for example, laboratory and x-ray examinations, as well as hospitalization for illnesses or accidents of a more serious nature. The Plan extends for a full calendar year commencing with the first day of the academic year.

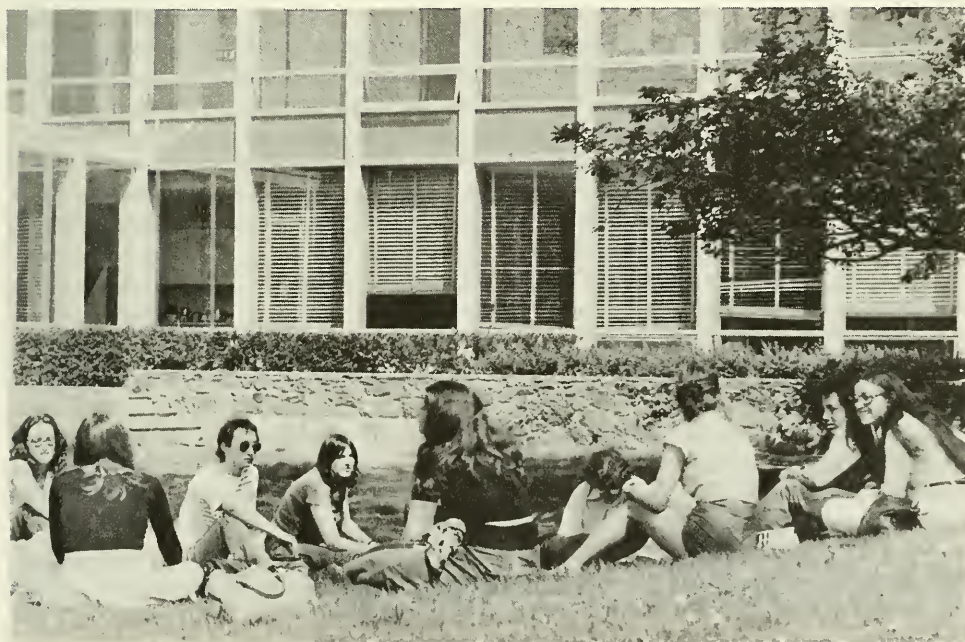
A detailed brochure of the services offered by the University Health Services as well as an outline of the details of the Plan is mailed to students. Students and parents are urged to read this brochure carefully and keep it for reference. This brochure includes a statement of patients' rights in Health Services.

Whereas situations not covered within the Health Services or by the Insurance Plan are infrequent, an awareness of these possibilities will lessen misunderstanding and disappointment.

In such instances, students and their parents are responsible for expenses which are not covered by the University's health program or its associated insurance policy. Similarly, students and their parents are responsible for expenses which are not covered by alternative insurance programs substituted for the Brandeis University Student Health Insurance Plan.

Psychological Counseling Center — Mailman House

The Psychological Counseling Center, a part of the University Health Services, is located in Mailman House. At the Center, a professionally trained staff provides a range of counseling and psychological services designed to enhance personal development of students and to assist those who are experiencing personal or emotional problems. Individual counseling and brief psychotherapy are available both to undergraduate and graduate students; group therapy is also available on a limited basis. Students can make an appointment to see a counselor by applying directly to the Counseling Center office on the second floor of Mailman House.



Admission

As a rule, only well-qualified men and women who have completed the normal four-year program leading to the bachelor's degree will be considered for admission to the Graduate School. Graduates of foreign schools and others who have completed the equivalent of a bachelor's degree program may apply, describing the educational program they have completed.

Testing

Applicants for admission to the graduate programs in biochemistry, biophysics, politics, and psychology are required to take the Graduate Record Examination, including the aptitude test portion and preferably one advanced test in a field related to the proposed area of graduate study. Applicants for admission to the graduate program in psychology must also take the Miller Analogies Test. Applicants to the Jewish Communal Service program must submit the results of either the Graduate Record Examination or the Miller Analogies Test. All other applicants are urged to take the Graduate Record Examination. In order for the results of the Graduate Record Examination to be considered, the applicant should take the examination no later than January preceding the academic year for which application is made. Information concerning the Graduate Record Examination is available from the Educational Testing Service, Princeton, N.J. 08541, or Box 1025, Berkeley, Calif. 94704.

Foreign students, regardless of field of graduate study, are required to take the Test of English as a Foreign Language (TOEFL) unless English is their first language. Applications for admission to the test should be made to TOEFL, Educational Testing Service, Princeton, N.J. 08541, U.S.A. The test is administered at various established centers abroad.

Application

Specific requirements for each graduate program are to be found under the appropriate headings in this catalog. Each applicant should consult these requirements before filing an application. A student may apply to only one graduate department or program. Applicants to the Graduate School should write to the Dean of the Graduate School of Arts and Sciences, stating which program of study he or she wishes to enter. A catalog and appropriate forms will be forwarded to the applicant. The "Application for Admission" should be completed and returned in duplicate as soon as possible. Applicants requesting financial aid must file a GAPS FAS form. Closing dates for receipt of applications by the several graduate departments are included with the application materials.

Applications for admission for the Spring Term must be filed by December 1. Students are not usually admitted at midyear, and those who do gain admission are not normally eligible for financial aid.

All applicants must arrange to forward, in duplicate, official transcripts of all undergraduate and graduate work. In addition, they must have forwarded, on forms provided by the Graduate School, two letters of recommendation, preferably from professors with whom they have studied in their proposed area of study. Applicants who have engaged in graduate study elsewhere should request at least one of the recommendations from a professor with whom they have done graduate work.

Many departments also require the submission of samples of work as well as the materials described above. Applicants should consult departmental requirements in a later section of this catalog for enumeration of additional materials to be submitted.

All applications must be accompanied by an application fee of \$25, payable by check or money order to Brandeis University. No application will be processed until this fee is paid.

Admission Procedure

All applicants are considered on a competitive basis. The number of students admitted each year in each department is limited so that the Graduate School may operate effectively under its distinctive principles of individualized study and apprenticeship. Consequently, admission may sometimes be denied to qualified persons. Meeting the minimum standards of admission merely qualifies the applicant for a place in the group from which final selections will be made. Selections are based on the applicant's ability to do graduate work of high quality, as shown by: the distinction of his or her previous record, particularly in the proposed area of study; the letters of recommendation submitted in support of the application; and his or her presumed adaptability to the particular graduate programs offered by Brandeis University. In addition, knowledge of foreign languages, relevant practical experience in the field, samples of work, the results of the Graduate Record Examination, and indications of character are considered.

Each application for admission with all supporting records is first examined by the appropriate department or committee. The department or committee recommends to the Dean of the Graduate School which applicants should be selected for admission and for financial aid. The Dean reviews all applications in the light of departmental recommendations, and informs each applicant of the results in April.

Acceptance

A student who has been accepted for admission to the Graduate School will be notified by a letter specifying the date by which he or she must accept the offer of admission and awards, if any. If a student selected for admission indicates that he or she does not intend to accept the offer or fails to reply by the date specified, the admissions offer becomes void and another applicant may be accepted.

Brandeis University subscribes to the "Resolution Regarding Scholars, Fellows, Trainees and Graduate Assistants" of the Council of Graduate Schools in the United States. The resolution states:

"Acceptance of an offer of financial aid (such as a graduate scholarship, fellowship, traineeship, or assistantship) for the next academic year by an actual or prospective graduate student completes an agreement which both student and graduate school expect to honor. In those instances in which the student accepts the offer before April 15 and subsequently desires to withdraw, the student may submit in writing a resignation of the appointment anytime through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from the institution to which a commitment has been made. Similarly, an offer by an institution after April 15 is conditional on presentation by the student of the written release from any previously accepted offer. It is further agreed by the institutions and organizations subscribing to the above Resolution that a copy of this Resolution should accompany every scholarship, fellowship, traineeship, and assistantship offer."

Students who are accepted must provide the Graduate School Office with an official final transcript of their undergraduate record and of any graduate work in process at the time of acceptance. In addition, students who are accepted *are required to complete and return a medical questionnaire and a health insurance form*, which will be sent with notification of acceptance. All acceptances are conditioned on subsequent approval by the University Health Office. All persons admitted to the Graduate School must give evidence of their physical and

psychological capacity to carry on their studies.

If, after having been admitted, a student cannot attend, he or she should notify the Dean of the Graduate School as soon as possible. If such students are to be admitted for a subsequent academic year, they must request reactivation of their applications at the appropriate time, and bring them up to date.

Applicants who have been denied admission may reapply in a later year, particularly if they have had further training which would strengthen their applications or if they can submit additional letters of recommendation.

Admission to the Graduate School does not imply that the successful applicant has been accepted as a candidate for a graduate degree. Superior performance at Brandeis University is essential. Admission to candidacy for the M.A. or M.F.A. is granted by the graduate department or committee administering the program of study. Admission to candidacy for the Ph.D. is granted by the Graduate Council on the recommendation of the department or committee administering the program of study.

Readmission

Admission is valid only for one academic year. A student's record is reviewed annually, and he or she may be denied readmission. Students completing the requirements for the M.A. or M.F.A., and students who already hold a master's degree but who have not yet been admitted to candidacy for the doctorate, must make formal application for readmission by the first business day in March. The readmission application must be filed with the Graduate School Office.

Foreign Students

Graduates of foreign colleges and universities who have the equivalent of an American bachelor's degree, and foreign students who have been graduated from American universities may compete for admission and financial assistance at Brandeis, which is authorized under Federal law to enroll nonimmigrant alien students.

In order to ascertain the eligibility of the candidate, Brandeis University requires that each applicant file a *Preliminary Request for Application* form obtained by writing to either the Graduate School of Arts and Sciences or the Office of International Programs any time before September 1 of the year preceding the anticipated admission date. This information will be evaluated and the application form itself will be sent to those who qualify.

Final applications must be completed and returned by February of the year in which the student seeks fall admission. Successful applicants will be notified as soon as possible.

Entrance Examinations. All applicants whose major language is not English must take the Test of English as a Foreign Language (TOEFL); thorough competence in English is required for study at Brandeis. All applicants are urged to take the Graduate Record Examination (GRE). They should consult this catalog for the departments which may *require* this examination. For information concerning the administration of both these examinations, applicants should write to the Educational Testing Service, Princeton, N.J. 08541.

Financial Aid. Financial aid in the form of scholarships, fellowships, teaching assistantships, and research assistantships is available to only a few of the most outstanding students. In any case, the total assistance offered usually covers only a small proportion of the student's total annual expenses. Hence the students, when applying for admission, should indicate a means of financial support. At least \$4,000 in United States currency is necessary to cover living costs for the nine-month academic year, exclusive of expenses for tuition, travel and summer or vacation periods.

Employment. The regulations of the United States Immigration and Naturalization Service limit strictly the amount of paid work that a student from abroad may do. During the summer vacation, the Immigration Service may permit the student to obtain off-campus employment. Such permission cannot be guaranteed, however. Students must petition on special United States government forms, through the Office of International Programs, for permission to accept such employment.

Requirements for the Degree

The following general requirements apply to the awarding of graduate degrees in all areas of study. For specific program requirements students should consult the appropriate section of this catalog.

Master of Arts

In order to qualify for a master's degree, the student must complete the equivalent of one full year of graduate study at Brandeis University, ordinarily computed at a minimum of eight half-courses of approved study. Departments may, at their option, require more than eight half-courses of graduate study. Departments offering master's programs may require that the candidate demonstrate a reading knowledge of at least one foreign language and pass satisfactorily a general or qualifying examination which, at the department's discretion, may be in one or more parts and may be written, oral, or both. Where a thesis is required for the master's degree, two copies must be submitted to the department chairman in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

The master's degree must be earned within four years from the inception of graduate study at Brandeis University.

Master of Fine Arts

In order to qualify for the degree of Master of Fine Arts in Music, the candidate must complete with distinction twelve half-courses at the graduate level, and must meet the specific requirements for the degree as set forth under the Music Department, *Requirements for the M.F.A. Degree*, in a later section of this catalog. Two copies of the thesis or composition must be submitted to the department chairman in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

In order to qualify for the degree of Master of Fine Arts in Theater Arts, the candidate must complete the equivalent of sixteen half-courses at the graduate level and must meet the specific requirements for the degree outlined under Theater Arts, *Requirements for the M.F.A. Degree*, in a later section of this catalog. Students enrolled for specialization in dramatic writing must submit two copies of a play in final form in lieu of a thesis.

The Master of Fine Arts degree must be earned within five years from the inception of graduate study at Brandeis University.

Doctor of Philosophy

In order to qualify for the degree of Doctor of Philosophy, a student must ordinarily complete a minimum of three years of graduate study, including two full years of residence and a third year devoted to the preparation of a doctoral dissertation. Under certain conditions, credit for advanced standing will be granted for work taken in residence in graduate schools of other universities. Each department or committee reserves the right to require prospective candidates for the degree to perform work in excess of its minimum standards to assure thorough mastery of the area.

Prospective candidates must demonstrate proficiency in at least one foreign language. In all areas of study the student must satisfactorily pass a general or qualifying examination which, at the department's discretion, may be in one or more parts and may be written, oral, or both. In addition, all prospective candidates must write a doctoral dissertation and defend it in a final oral examination.

To be eligible for the Ph.D. degree in any given year, the student must have (1) been admitted to candidacy for the doctorate, (2) completed all residence requirements, and (3) passed all language and qualifying examinations, by the close of the semester preceding the semester in which the degree will be conferred.

Students entering Brandeis University with no previous graduate work must earn the doctorate within eight years from the inception of study. Students who are granted credit for a year of graduate work completed elsewhere must earn the degree within seven years from the inception of their study at Brandeis.

Language Requirements

There is no University requirement for foreign language competency at either the master's or doctoral level.

Each department or program determines which languages are acceptable as satisfying its foreign language requirement. Some departments may not require foreign language competency, while others may set requirements which will vary within the sub-fields offered by those departments.

In departments where languages are required, students are expected to satisfy the requirement as soon as possible. Completion of this requirement at another university does not satisfy the Brandeis requirement.

For specific requirements of each department or program, consult the departmental listing in the following section of this catalog.

Admission to Candidacy

A student who (a) has demonstrated a knowledge and mastery of the subject matter of the field at a level satisfactory to the department or committee; (b) has passed all departmental qualifying examinations; (c) has indicated a capacity for independent research of high quality; and (d) has satisfactorily completed all specific department or committee requirements for admission to candidacy may, at the recommendation of the department or committee, be admitted under the rules of the Graduate Council to candidacy for the degree of Doctor of Philosophy. In order to be eligible for the degree, the student must be admitted to candidacy at least one semester before it is awarded.

Application for Graduate Degrees

Candidates for the M.A., M.F.A., and Ph.D. degrees must file with the Graduate School Office an application for the degree no later than December 1 for a February degree and no later than March 1 for a May degree of the academic year in which the degree is to be conferred. Upon the written recommendation by a candidate's department or committee that the application be approved, the record will be reviewed by the Graduate Council which recommends the student to the University's Board of Trustees for the degree. In case of failure or withdrawal from candidacy in any year, the student must reapply by filing a new application in a later year.

Dissertation and Final Oral Examination

When a student is ready to embark upon the preparation of a doctoral dissertation, a Dissertation Reading Committee of no less than three faculty members, at least one of whom is a tenured member of the faculty, will be appointed by the chairman of the student's department. The student's principal adviser will serve as the chairman of this committee. The Dissertation Reading Committee will guide the research for and preparation of the dissertation. When this committee certifies its approval of the dissertation to both the Dean of the Graduate School and the chairman of the student's department, the latter, with the approval of the Dean of the Graduate School, will appoint a Dissertation Examining Committee to preside over the student's Final Oral Examination and will notify the candidate of the time and place of the Final Oral Examination at least three weeks prior to the scheduled date of the examination. Two copies of the dissertation, as well as an abstract of no more than 350 words, should be submitted to the Dissertation Reading Committee for approval. Style and format of dissertations are determined by the respective departments.

The dissertation, when approved by the readers, must then be deposited in the department office where it will be available for inspection by all interested members of the faculty for at least two weeks prior to the Final Oral Examination.

The Dean of the Graduate School will publish in the *Brandeis University Calendar* the time and place of a candidate's Final Oral Examination and the title of the doctoral dissertation. The Final Oral Examination will be open to any member of the faculty engaged in graduate instruction and to invited faculty members from other institutions.

The Dissertation Examining Committee, recommended by the department chairman and approved by the Dean of the Graduate School, must be composed of a minimum of three faculty examiners, at least one of whom shall be a tenured member of the faculty and one of whom shall be from a graduate department outside the student's own, though preferably from a related area.

The examination may be restricted to a defense of the dissertation, or may cover the whole field of the dissertation. The candidate will be notified by his or her department or committee of responsibility for coverage prior to the examination.

A report, signed by the Dissertation Examining Committee, certifying the candidate's successful performance on the Final Oral Examination, will be submitted to the Dean of the Graduate School.

Deposit and Publication of Dissertation

No later than the dates specified in the current Academic Calendar for February and May degrees, the candidate must deposit two copies of the finished dissertation, including the original typescript, in a state suitable for microfilm and Xerox publication. Both copies of the dissertation must have the signed approval of the dissertation supervisor and readers. One copy will be retained by the library, the other will be returned to the student, both bound. The candidate must also submit two copies of an abstract of the dissertation, not exceeding 350 words, which has been approved by the dissertation supervisor.

A detailed statement of the Graduate School publication regulations is available from the Graduate School Office. See also the statement in this catalog, under *Fees*, on the Final Doctoral Fee.

Academic Regulations

Registration

Every resident student must register in person at the beginning of each semester, whether attending regular courses of study, carrying on research or independent reading, writing a thesis or dissertation, or utilizing any academic service or facility of the University. Students who have completed their residence requirements and who wish to utilize any academic service or facility of the University must also register.

There is a charge of \$10 if registration is not completed at the time specified in the Academic Calendar.

Registration consists of payment of all fees for the semester and filing a Registration Card and other duly completed required forms. Program Cards are filed at a later date.

Program of Study

Before filing a Program Card, the student should plan a program of study in consultation with the chairman of the department. All courses for which the student registers for credit must be listed on the Program Card.

Audited courses must also be listed, noted as "audit," and the Program Card must be signed by instructors of such courses.

Graduate students may not normally register for an undergraduate course (numbered below 100) for degree or residence credit unless they secure the signed approval of both the instructor of that course and their department chairman. The student must then petition the Dean of the Graduate School for the desired credit, and must receive approval before or at the time of registration. Credit will not be given for undergraduate courses taken to make up deficiencies in the student's preparation for a graduate program of studies, nor will credit ordinarily be given for language courses that are not part of the student's program of studies. Under no circumstances may a student receive credit toward completion of degree or residence requirements for courses undertaken to aid in the completion of language requirements. Scholarship students may not apply their scholarships toward the remission of tuition for undergraduate courses taken to remedy deficiencies. The completed Program Card must be signed by the department chairman before submission at registration, and the department chairman will certify whether the program of study is full-time or part-time and, if part-time, whether one-quarter, one-half, or three-quarters time. Full-year courses must be re-entered at midyear. Students wishing to drop a full-year course at midyear must petition the Dean of the Graduate School for permission, after receiving the written approval of the instructor of the course and of the chairman of their department. Students may not register at midyear for a full-year course without the written approval of the instructor of the course and their department chairman.

Program Cards are filed approximately two weeks after the opening days of instruction (see Academic Calendar for specific date) and are considered to be final.

Auditing Courses

The privilege of auditing courses without fee is extended to all regularly enrolled graduate students except special students. Special students may audit courses by paying for them at the same rate as those taken for credit. No courses may be audited without the permission of the instructor. Auditors may not take examinations or expect evaluation from the instructor. No credit is given for an audited course.

Change of Program

Only under unusual circumstances are students allowed to drop courses after filing their Program Cards. To do so, a Course Change Card is obtained from and returned to the Graduate School Registrar. Courses must be dropped no later than one week prior to the beginning of an examination period. Each course dropped is subject to a \$10 fee.

Registration in Terms of Time

Advanced students — those who have completed two full years of residence, either by graduate work at Brandeis or by receiving credit for graduate work done elsewhere — may register in terms of time, subject to the signed approval of their department chairman. Their Program Cards must indicate that they are registering full-time or a specific fraction thereof (one-quarter, one-half, or three-quarters).

Registration in terms of time is a device that helps to individualize programs of study and permits increased freedom for independent research for advanced graduate students. Registration in terms of time frees students to pursue a program of study that partially accepts or bypasses altogether the system of formal courses, although students registering in terms of time will usually register for an advanced research or dissertation course. Their time will be spent in such research and reading as will be most beneficial to their development as scholars.

Absence from Examinations

Students who are absent from a midyear or final examination without an accepted excuse will receive a failing grade for that examination. No students may be excused from such examination unless for emergency or medical reasons, nor may they be excused if they were able to notify the instructor in advance and failed to do so. Cases involving absence are referred to the chairman of the department who will decide whether a make-up examination shall be allowed, and who will notify the Dean of the Graduate School. The examination must be taken within six weeks of the opening of the next semester.

Grades and Course Standards

Graduate students are expected to maintain records of distinction in all courses. Letter grades will be used in all courses in which grading is possible. Courses graded “non-credit” are those which carry no credit but which are required of the student. In thesis or research courses, if a letter grade cannot be given at the end of each semester or academic year, “Credit” or “No Credit” may be used.

“No Credit” and any letter grade below B-minus are unsatisfactory grades in the Graduate School. A course in which the student receives an unsatisfactory grade will not be counted toward graduate credit.

At the end of each academic year the Registrar of the Graduate School will issue to each student a report of grades and of degree requirements satisfactorily completed.

Incompletes

A student who has not completed the research or written work for any course may receive a grade of “Inc.” (incomplete) or a grade of failure at the discretion of the instructor in the course. A student who receives a grade of “Inc.” must satisfactorily complete the work of the course in which the “Inc.” was given in order to receive credit for the course and a letter grade. An “Inc.” unless given by reason of the student’s failure to attend a final examination, must be made up no later than the end of the term following the term in which it was received. When failure to take a

final examination has resulted in an "Inc.," resolution of that grade to a letter grade must occur within six weeks of the beginning of the next semester. If a student requires additional time to settle an incomplete grade, he or she may petition the Dean of the Graduate School for an extension of time, provided the petition is signed by the instructor of the course and by the department chairman. Such a petition must be filed prior to the expiration of the deadline for making up an incomplete.

Credit for Work Done Elsewhere

Graduate level courses taken prior to matriculation at Brandeis University may not be counted toward fulfillment of the residence requirement for the Master of Arts degree, although a department may accept work taken elsewhere in partial fulfillment of specific course requirements for the degree. In that case, additional courses are designated to replace courses from which the student has been exempted.

A maximum of one term of residence credit for graduate level courses taken prior to matriculation may be counted toward fulfillment of the residence requirements for the Master of Fine Arts degree.

Students admitted to Ph.D. programs may file an application to have graduate level courses taken prior to matriculation counted toward fulfillment of residence requirements at this institution. A maximum of one year of residence credit may be granted.

Applicants for transfer credit will not necessarily be granted the credit requested. Each department reserves the right to require of any student work in excess of its minimum standards to assure thorough mastery of the area of study. In all cases, courses being transferred must carry a grade of "B" or better and must have been earned at an appropriately accredited institution.

After completing one term of residence at a full-time rate, or the equivalent at a part-time rate, students eligible to apply for transfer credit may do so. Forms are obtained at the Graduate School Office and are submitted to the student's department for its approval. The form is then forwarded to the Dean of the Graduate School for final approval. The Dean will advise the applicant of any action taken.

Credit for work at another institution taken concurrently with studies in the Graduate School must be approved for potential transfer credit by both the student's department and the Dean of the Graduate School prior to registration for such courses. Such approval is granted only in unusual circumstances. Students who formally cross-register with Boston College, Boston University and/or Tufts University through the Consortium do not need prior approval.

Residence Requirements

Residence requirements for all graduate degrees are computed by determining the amount of registration for credit and the tuition charges. Part-time students and teaching assistants pursuing part-time programs of study for credit complete their residence requirements when their fractional programs (one-quarter, one-half, three-quarters) total the amount required of a full-time student.

Master of Arts

The minimum residence requirement for all students is one academic year on a full-time graduate credit program at the full tuition rate or the equivalent thereof in part-time study. Transfer credit may not be applied to residence requirements for the Master of Arts degree.

Master of Fine Arts

The minimum residence requirement for all students in Music is three semesters at a full-time rate, at the full tuition rate for each semester, or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

The minimum residence requirement for all students in Theater Arts is four semesters at a full-time rate, at the full tuition rate for each semester, or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

Doctor of Philosophy

The minimum residence requirement for all students is two academic years on a full-time graduate credit program for each year, at the full tuition rate for each year, or the equivalent thereof in part-time study. A maximum of one year's approved transfer credit may be granted toward residence for the Ph.D. degree.

Full-Time Resident Students

A full-time student is one who devotes the entire time, during the course of the academic year, to a program of graduate work at Brandeis University, to the exclusion of any occupation or employment. In exceptional cases, however, a student may accept outside employment with the approval of the department chairman.

A full-time program may include a combination of teaching and research assistance, work leading to the fulfillment of degree requirements, such as preparation for qualifying, comprehensive, and final examinations, or supervised reading and research, or the writing of M.A. theses and Ph.D. dissertations, as well as regular course work.

A full-time resident student may take as many courses for credit in any semester as are approved by the department chairman, but no student may receive credit for, or be charged for, more than a full-time program in any semester. Thus the minimum residence requirement for any degree may not be satisfied by an accelerated program of study or by payment of more than the full-time tuition rate in any single academic year.

Ph.D. candidates and students for whom the M.A. and M.F.A. degrees are terminal degrees may continue as full-time students on completion of their residence requirements by registering at the post-residence fee rate (See p. 26).

Part-Time Resident Students

A part-time student is one who devotes less than the entire time to a program of graduate work at Brandeis University. Students may register for a credit program of one-quarter, one-half, or three-quarters time. A part-time student may engage in outside employment with the permission of the department chairman.

Students wishing to pursue part-time residence study leading to a graduate degree must explain in writing, at the time they seek admission, why full-time study is not possible. Students receiving financial aid from the University, who wish to change their status from full-time to part-time residency, must file with the Graduate School Office an explanation of why full-time study is no longer possible.

Post-Resident Students

A graduate student who has completed residence requirements and who registers in order to utilize academic services or University facilities while completing degree requirements is a post-resident student.

Special Students

Properly qualified persons who wish to audit or to take courses without working for a degree will be admitted. Special students are not eligible for University loans, scholarships, fellowships, teaching or research assistantships, nor will they be considered for resident counselorships. Special students who later wish to change their status to that of part-time or full-time students working for a degree must apply for admission as resident students. They must also file a special petition if they wish credit to be accepted for any courses taken at Brandeis as special students. Credit for such course work may be granted in exceptional cases.

Leave of Absence

Students who have not completed their residence requirements may petition for leave of absence. The petition must have the approval of both the chairman of the department and the Dean of the Graduate School. Leaves of absence up to one year will normally be granted to students in good academic standing who present compelling personal reasons or need to do work off campus in connection with their graduate studies. Time spent on authorized leaves of absence will not be deducted from the maximum time permitted to complete degree requirements.

If for any reason a student must extend a leave of absence, he or she must request such extension in writing before the leave of absence expires. Failure to do so will result in being automatically dropped from the Graduate School roster.

Continuation

Graduate students who have completed residence requirements and who are not registered during the period in which they are completing degree requirements are considered Continuation Students. A student in this category is not eligible for a leave of absence, except for reason of ill health (See Fees, p. 27).

Withdrawal

A student who wishes to withdraw from the Graduate School at any time before the end of the academic year must give immediate written notice to the department chairman and to the Dean of the Graduate School. Failure to comply may subject the student to dishonorable discharge, refusal of readmission, cancellation of the privilege of securing an official transcript and, in the case of a student withdrawing within 30 days of the beginning of classes, loss of eligibility for partial refund of tuition. Such a student must pay tuition for the full semester. Permission to withdraw will not be granted if the student has not discharged all financial indebtedness to the University or has not made arrangements for subsequent payment to the satisfaction of the controller's office.

Discipline

The disciplinary authority of the University is vested in the President of the University and, subject to his reserved powers, in the Dean of the Graduate School of Arts and Sciences and in the principal administrative officers, including the chairmen of the several graduate programs, in all cases involving graduate students.

Original jurisdiction in any case involving infraction of any rule or regulation or standard of conduct by a graduate student shall lie within the administrative officer of the University who is immediately concerned. Serious cases will be referred for hearing to the Disciplinary Committee of the Faculty Council of the Graduate School of Arts and Sciences, chaired by the Dean of the

Graduate School. The chairman of the student's department shall be invited to attend any meeting at which such a case is discussed.

The Graduate Student Council has been invited to elect annually one graduate student from the School of Social Sciences, one student from the School of Science, and one student from the Schools of Creative Arts and Humanities, together to comprise a panel of three, who may form the Graduate School's Committee on Discipline to consider disciplinary cases involving non-academic offenses when the student who is being considered for discipline so requests.

Exclusion, Dismissal or Expulsion

The University reserves the right to dismiss or exclude at any time any student whose character, conduct, academic standing or financial indebtedness it regards as undesirable, through disciplinary procedures established in the Graduate School. Neither the University nor any of its trustees or officers shall be under any liability whatsoever for its disciplinary action, exclusion or dismissal.

The University also reserves the right to revoke, cancel or reduce at any time any financial or honorific award made to any graduate student, for character, conduct, academic standing or financial indebtedness regarded by the University as undesirable; neither the University nor any of its trustees or officers shall be under any liability whatsoever for cancelling, revoking or reducing any award.

Fees and Expenses

Payment of tuition and other fees due on the day of registration is a part of the registration procedure. A student who is not prepared to pay such fees on the day of registration will be refused the privilege of registration.

A student who defaults in the payment of indebtedness to the University shall be subject to suspension, dismissal, and refusal of a transfer of credits or issuance of a transcript.

Such indebtedness includes, but is not limited to, delinquency of a borrower in repaying a loan administered by the Student Loan Office, and the inability of that office to collect such a loan because the borrower has discharged the indebtedness through bankruptcy proceedings. If the student is a degree candidate, his or her name will be stricken from the rolls.

A student who has been suspended or dismissed for nonpayment of indebtedness to the University may not be reinstated until such indebtedness is paid in full.

Application Fee: \$25. Payable by all applicants for admission at the time the application for admission is submitted. It is not refundable. Checks and money orders should be made payable to Brandeis University. No application for admission will be processed until this fee is paid. This fee is not required of Brandeis graduates.

Tuition Fee: The fees for tuition in the Graduate School for 1982-83 are as follows:

Full-time resident students: \$7,650 per year, or \$3,825 per term.

Part-time resident students:

<i>Per Term</i>	<i>Per Year</i>	<i>Fraction Program of Study</i>
\$2,868.75	\$5,737.50	Three-quarters
\$1,912.50	\$3,825.00	One-half
\$ 956.25	\$1,912.50	One-quarter

Special Students: \$956.25 per course per term.

In view of the constantly increasing costs of education, students may expect one or more tuition increases during their academic careers.

Post-Residence Fee: Students who have completed their residence requirements and who wish to continue in residence to utilize any academic service or University facility must register at the usual tuition rates. Graduate students whose tuition is not being paid from scholarship or fellowship funds awarded by the University or other sources may petition the Dean of the Graduate School for a reduction of the post-residence fee to \$725. Students who continue to utilize any academic service or University facility after having completed residence, but who have failed to register, are subject to disciplinary action by the Dean of the Graduate School. A student who is eligible for registration on the post-residence basis may file a Program Card for full-time study, in terms of courses or in terms of time or any combination thereof, provided the department chairman approves of the program of study as being a full-time program and signs the Program Card.

Mixed Tuition Fee: In the event that a student needs to register for only a part-time program (one-quarter, one-half, or three-quarters) in order to complete residence requirements, but wishes to register for additional courses or take a fuller program of study, he or she shall be charged for the part-time program needed to complete residence, plus the post-residence fee.

Late Registration Fee: \$10. Payable for failure to complete registration at the time announced by the Graduate School Office.

Change-of-Program Fee: \$10. Payable by any graduate student who wishes to drop a course after filing Study Cards.

Incomplete Records Fee: \$25. Payable for failure to complete administrative requirements by date(s) specified in the Academic Calendar and/or Catalog (e.g., late filing of Health Examination Report, failure to register, etc.).

Continuation Fee: \$20. Payable annually by graduate students who have completed residence requirements and who are not registered during the period in which they are preparing for the completion of degree requirements. Students in this category are not eligible for leaves of absence.

Master's Fee: \$50. A candidate for the M.A. or the M.F.A. who is subject to the Continuation Fee and who earns a degree in any semester following one in which he or she has not been in residence shall pay the Master's Fee. The fee is chargeable only once.

Final Doctoral Fee: \$250. This fee covers all costs for the year in which the Ph.D. degree will be conferred, including the costs for the microfilm publication of the dissertation, publication of the abstract of the dissertation in *Dissertation Abstracts*, issuance of a Library of Congress number and appropriate library cards, binding two copies of the dissertation, one for use in the University Library, and one Xerox-printed copy in book form for the author. The Final Doctoral Fee covers the rental expenses for academic robes for graduation and the cost of the diploma. Students who have been in residence in their final year may deduct any tuition charges which they may have paid to the University in that final year. Students who have paid the Continuation Fee in the final year may deduct that fee from the Final Doctoral Fee.

NOTE: All candidates for the Ph.D. degree must pay the \$250 Final Doctoral Fee prior to the receipt of their degrees.

Reinstatement Fee: \$10. Payable by a student who, after withdrawal, suspension or dismissal, has been reinstated with the consent of the Dean of the Graduate School.

Transcript Fee: \$2. Students, former students, and graduates who request official transcripts of their records in the Graduate School are charged \$2 for each copy issued after the first one, which is free. Requests by mail for transcripts must be accompanied by a check in the correct amount, payable to Brandeis University. Transcripts will be issued only to those students whose university financial records are in order.

Diploma Fee: \$10. Payable by candidates for the M.A. and M.F.A. degrees.

Student Health Fee: \$145. Entitles the graduate student to use of the Health Services.

Student Insurance Fee: \$205. Payment of the Insurance Fee entitles the graduate student to participate in the benefits of the Health Insurance Program. The fee is payable at registration and no portion is refundable. Student Insurance is optional for Special Students.

Dependent Insurance Coverage: Although the health services offered at Stoneman Infirmary are not extended to dependents of students, an optional family health insurance plan is available to married students for a fee of \$540. Special Students are not eligible for this plan.

Parking Fee: \$5-\$35. Payable annually at fall registration for privilege of parking an automobile on campus. Fee varies with assigned parking area.

Refunds

The only fee which may be refundable, in part, is the tuition fee. No refund of the tuition fee will be made because of illness, absence or dismissal during the academic year. If a student withdraws, he or she may petition the Dean of the Graduate School for a partial refund of tuition in accordance with the following:

1. Tuition:

Withdrawal: before the opening day of instruction: 100% of semester tuition. On or before the second Friday following the opening day of instruction: 75% of semester tuition.

On or before the fifth Friday following the opening day of instruction: 50% of semester tuition.

After the fifth Friday following the opening day of instruction: no refund.

2. Scholarship: In the case of a scholarship student who withdraws, the student's account will be credited with the same proportion of the semester scholarship as charged for tuition: 25% if the student leaves on or before the second Friday; 50% on or before the fifth Friday; and, 100% thereafter. The balance of the scholarship will be cancelled.

All refunds are subject to review and final approval by the University Controller.

Financial Assistance

To help students whose records indicate scholarly promise, the University makes available special scholarships and fellowships and a variety of awards and work opportunities. No student is eligible for aid without filing with the Graduate School Office a standard financial aid form (GAPSFAS). All scholarships and fellowships are granted for one academic year; therefore, a registered student who holds a scholarship or fellowship must apply annually for a renewal by filing the "Application for Financial Assistance."

All awards are granted and accepted with the understanding that they may be revoked or reduced at any time for undesirable conduct or poor academic standing.

Ordinarily, no student may hold a fellowship, scholarship, or teaching assistantship for more than two years of study for the M.A. degree, for more than three years of study for the M.F.A. degree, or for more than four years of study for the Ph.D. degree. Ordinarily, no student may receive a scholarship, fellowship, or teaching assistantship after one year of study at the post-residence fee. Priority in making awards is given to full-time students and teaching assistants.

In the case of a student receiving financial aid from Brandeis University, whether in the form of a teaching assistantship, scholarship or fellowship, the approval of the Dean of the Graduate School is required, in addition to the approval of the department chairman, before the student may engage in outside employment.

Scholarships

A scholarship is an award, on grounds of scholarly ability and need, of financial credit that will be used exclusively for remission of tuition fees. Full scholarships and partial scholarships are available. Scholarship students are liable for all but tuition charges.

Fellowships

A fellowship is an academic award of honor to outstanding students of good character to help them in furthering advanced study and research. The amount of the stipend depends on the quality of the student's record and performance; need is also considered in most cases. A fellowship recipient must pay tuition fees unless the award includes a scholarship in an amount covering tuition. No services are required of students for fellowship or scholarship awards.

Teaching Assistantships

Teaching assistants are resident students in the Graduate School who do part-time teaching as part of their training and are paid. The University has established teaching assistantships to enable distinguished graduate students to gain teaching experience while continuing their studies. Teaching assistants are eligible for other awards, including scholarships and fellowships.

Teaching assistantship appointments are made on the authority of the President of the University by the Dean of the Graduate School who, in turn, acts on the recommendation of a student's department chair. Appointments are made for periods of one year or one semester, but are renewable. All awards of teaching assistantships to incoming students are conditioned on an interview with a University representative, prior to registration. The University reserves the right to terminate any appointment at any time for due cause. Conduct, character or academic standing that is regarded as undesirable may constitute cause, but the University need not assign any reason for the termination of an appointment at any time. All teaching assistantship appointments are made and accepted with this understanding, and neither the University nor any of its trustees or officers shall be under any liability whatsoever for the summary termination of a teaching assistantship.

Research Assistantships

Research assistantships are available in the science areas. First-year graduate students are not normally eligible for appointment. Application should be made to the chairman of the department or the committee administering the graduate program.

Loans

Guaranteed Student Loan Program (GSLP). A student may be eligible for a guaranteed student loan if he or she meets the following requirements: (1) is accepted for enrollment or is attending Brandeis University and is in good standing as determined by the University; (2) is carrying at least one-half the normal full-time work load; (3) is a citizen or national of the United States or is in the United States for other than a temporary purpose; (4) can demonstrate need. An eligible student may be able to borrow up to \$5,000 in any academic year at a 9% interest rate, and does not have to begin repayment until six months after he/she ceases to be at least a half-time

student. The total amount a student may borrow under the Guaranteed Student Loan Program, including both undergraduate and graduate school loans, may not exceed \$25,000. Special Students are normally ineligible for such loans.

Information and applications for this program are available from banks, savings and loan associations and credit unions.

Students who plan to borrow through one of the participating sources must have on file at the Graduate School Office a current Graduate and Professional Student Financial Aid Service form (GAPSFAS). Forms may be obtained at the Graduate School Office or from the Educational Testing Service, Princeton, N.J. 08541

Resident Counselorships

A limited number of positions is available for both married and unmarried men and women as counselors in the University residence halls. Applications may be obtained from the University Housing Office and should be returned no later than March 15. Appointments are made by the Director of University Housing on or about June 1.

Office of Student Employment

The Office of Student Employment assists students who need and desire part-time work. Students seeking part-time work should register with the Office of Student Employment. New students are not assigned part-time work prior to arrival on campus.

Academic Schools and Institutes

Crown School of Graduate Studies in American Civilization

The Irving and Rose Crown School of Graduate Studies in American Civilization was established through the generosity of Brandeis Fellows Irving and Rose Crown. Its primary objective is to support gifted students in their work toward a doctorate in the History of American Civilization. Crown Fellowships are granted occasionally to special students on the Brandeis campus from both the United States and abroad who are drawn from important facets of public life including the media and the foreign service.

Danielsen School of Philosophy, Ethics, and Religious Thought

The Albert V. Danielsen School of Philosophy, Ethics, and Religious Thought was made possible through an endowed gift from Brandeis Fellow Albert Danielsen. The School includes the Department of Philosophy, which places traditional emphasis on logic, epistemology, metaphysics, value theory and the history of philosophy. The advancement of philosophical thought in the context of contemporary issues is encouraged through scholarly and interdisciplinary approaches. One of several endowed professorships in the School is the Albert V. Danielsen Chair in Christian Thought.

Fierman School of Chemistry

The Harold and Minnie Fierman School of Chemistry, created through an endowment from the late Brandeis Trustee Harold L. Fierman, incorporates graduate and undergraduate programs, offering highly diverse and advanced research activities as well as lecture programs and colloquia.

The school has been aided by grants from the National Institutes of Health, National Science Foundation, Energy and Research Development Administration, Research Corporation, and

Petroleum Research Foundation. Research conducted under these agencies has been published in over 700 papers in leading professional journals.

Fisher School of Physics

The Martin Fisher School of Physics, established through an endowed gift from the late University Fellow Martin A. Fisher, encompasses both theoretical and experimental physics on the graduate and undergraduate levels and provides a setting for lectures and colloquia. Scholarship and Fellowship assistance given by Mr. Fisher serves to further enhance Brandeis' teaching and research capabilities.

Grants from agencies including the National Science Foundation and the Atomic Energy Commission support research programs in the Fisher School.

Kutz School of Biology

The Milton and Hattie Kutz School of Biology, a gift from the estate of the late Brandeis Fellow Hattie Kutz, embodies the University's undergraduate and graduate biology departments. The curricula is designed to teach at the molecular and cellular levels, and to present a comprehensive body of courses with special attention to current discoveries and experimentation. Students are encouraged to engage in original research and independent study.

A major portion of the governmental, industrial, and private research grants awarded to Brandeis is devoted to varied projects in biology and health sciences.

Lown School of Near Eastern and Judaic Studies

The Philip W. Lown School of Near Eastern and Judaic Studies, created through an endowed gift from the late Brandeis Trustee Emeritus Philip W. Lown, encompasses an intensive teaching and research program in all the main areas of Judaic Studies, the Ancient Near East and the Modern Middle East. In addition, the Lown School has programs which prepare students for Jewish communal service and programs of research in areas of direct concern to the American Jewish community.

The Department of Near Eastern and Judaic Studies is the primary teaching and research unit in the Lown School. In this department the University has assembled an unusual array of distinguished scholars who offer an extremely broad curriculum. A second unit in the Lown School is the Benjamin S. Hornstein Program in Jewish Communal Service which provides graduate education for students interested in professional careers in Jewish communal service and Jewish education. The School also includes the Center for Modern Jewish Studies which is devoted to the study of contemporary American Jewish life. The Center currently engages in research and teaching in three major areas: Jewish population studies, Jewish identity, and the Jewish family.

Swig School of Political Science

The Swig School of Political Science was created through a generous benefaction from the late Brandeis Trustee Emeritus Benjamin H. Swig. Included in the School is the University's Department of Politics which offers a wide range of courses in American government, international relations, theory, methodology, and comparative politics.

Several endowed academic chairs were also established by Mr. Swig. Among these are: the Harry S. Truman Chair in American Civilization; the Earl Warren Chair in American Constitutional Studies; the Christian A. Herter Chair in International Relations; and the Adlai E. Stevenson Chair in International Politics.

The Tauber Institute

The Tauber Institute was established in 1980 under the terms of an endowed gift to Brandeis by Dr. Laszlo N. Tauber of Alexandria, Virginia. It is an independent, multidisciplinary research institute that seeks to set into the context of modern history the causes, nature and consequences of the crisis of European society in the second quarter of the twentieth century with a particular focus on the origins of the European Jewish catastrophe. The Institute undertakes research into broad aspects of modern European intellectual, diplomatic, social, and political history. Among the areas of study with which it is concerned are: nationalism and racialism in modern Europe, European Jewish history since the Enlightenment, refugee problems, and the roots and development of Nazism, fascism, and anti-Semitism. The Institute is engaged in both research and teaching. Its government includes a distinguished Board of Overseers. Distinguished scholars are invited to visit the Institute. It also awards fellowships for advanced doctoral study and for postdoctoral research. Lectures, symposia and conferences are arranged under the auspices of the Institute which initiates and sponsors major research projects.





Areas of Study and Courses — 1982-1983

All courses meet for three hours a week unless the course description indicates otherwise. The presence of "a" in the course number indicates a half course given in the Fall Term; "aA" indicates a full course given in the Fall Term; "b" indicates a half course given in the Spring Term; "bB" indicates a full course given in the Spring Term; "aR" indicates a course given in the Spring Term; "bR," a course given in the Fall Term which is identical with an "a" or "b" course of the same number given in the Fall and Spring Terms respectively; the use of "c" after a course number indicates that the course is given as a half course but meets throughout the year.

The University reserves the right to make any changes in the offerings without prior notice. Faculty and course listings are accurate as of June 1, 1982.

***Course not offered for 1982-83.**

AMERICAN CIVILIZATION

See History of American Civilization (page 79).

ANTHROPOLOGY

Objectives

The graduate program in anthropology, leading to the degree of Doctor of Philosophy, is designed to produce scholars who will broaden our scientific knowledge of culture and society. Admission is limited to students whose primary interests lie within the fields of social and cultural anthropology or archaeology. Most graduates of the program accept appointments at colleges and universities, although a number take employment in government, private institutions or foundations. Intensive training for independent research is stressed, with particular emphasis on comparative studies and fieldwork.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Students need not have an undergraduate major in anthropology or sociology-anthropology. If admitted, however, the student without previous training in anthropology may be required to take additional courses, as determined by the department, to complete his or her residence requirements. Students should have a reading knowledge of one foreign language.

Faculty

Associate Professor Robert C. Hunt, *Chair*: Social anthropology. Modernization. Irrigation agriculture. Mesoamerica.

Professor George L. Cowgill: Mathematical and computer methods in archaeology. Mesoamerican civilizations. Origins of early states. Population anthropology.

Professor David Kaplan: Economics. Method and theory. Peasant cultures. Middle America.

Professor Marguerite S. Robinson: Social organization. Political anthropology. Rural development. South and Southeast Asia.

Associate Professor Judith T. Irvine: Ethnography of communication. Linguistics. Social stratification. Africa.

Associate Professor David E. Jacobson: Social anthropology. Urban social organization. Support systems. U.S.A. Africa.

Associate Professor Benson Saler: Comparative religion and folk philosophies. Psychological anthropology. Mesoamerica. South America.

Assistant Professor Marvin Davis: Social and cultural anthropology. Politics. Law. Social stratification. South Asia.

Assistant Professor D. Neil Gomberg: Physical anthropology. Comparative anatomy. Primate studies. Human evolution.

Assistant Professor Pierre-Yves Jacopin: Myth and ritual. Social organization. Cognitive anthropology. Egalitarian societies.

Assistant Professor Judith F. Zeitlin: Cultural ecology. Archaeological method and theory. Cultural resource management. Mesoamerican prehistory and ethnohistory.

Assistant Professor Robert N. Zeitlin: Sociocultural evolution. Prehistoric exchange. Pre-state societies. Archaeological method and theory. Mesoamerica.

Degree Requirements

Master of Arts

Ordinarily students are admitted for the doctoral program only. However, the Master of Arts degree in anthropology will be awarded to those students who have successfully fulfilled the minimum residence requirements set by the Graduate School and have met the following requirements: 1) Of the eight half-courses to be completed satisfactorily, one must be the first segment of the linguistics sequence, and one must be either of the special graduate courses in archaeology or physical anthropology; 2) If the student will not be continuing toward a Ph.D., he or she must also pass an M.A. qualifying examination, must demonstrate reading proficiency in a foreign language, and must submit an acceptable master's thesis (for doctoral students the Specialist Essay, described below, may substitute for the thesis component in the awarding of an M.A.).

Doctor of Philosophy

Program of Study. Flexibility of curriculum enables the student to organize a program of study around his or her particular anthropological interests. At the same time, the doctoral program is structured so that a broad familiarity with other aspects of the discipline is achieved.

At the outset an adviser is assigned each matriculant, but by the end of the second semester of study a student is expected to recruit two members of the faculty for a permanent advisory committee. In soliciting potential committee members, the student should be guided by interest and specialization. Once established, the committee is responsible, through regular meetings and informal consultation, for 1) guiding the student in the selection of suitable courses, 2) providing advice in the formulation of a dissertation research project, and 3) supervising the student's progress through the program.

With respect to formal course requirements, all students not exempted by virtue of previous graduate training must complete the four core courses in social organization and anthropological theory, a special one-semester seminar in archaeology, another in physical anthropology, and a two-semester course sequence in anthropological linguistics. Students concentrating in archaeology may substitute the one-semester course for the linguistics (Linguistics 102) requirement. Through course work and outside reading it is expected that students will attain a high degree of scholarly competence in at least one culture area and one topical field study.

The department may, at its discretion, grant a student transfer credit for graduate courses completed with a B grade or better at another accredited institution. Requests for transfer credit

will not be considered, however, until at least one semester of study has been completed at Brandeis. Prior approval is not needed for courses taken at Boston College, Boston University and Tufts University, for which formal cross-registration arrangements are in effect. In any case, a maximum of one year of residence credit is allowed by the Graduate School for work completed elsewhere.

At the end of sixteen half-courses, students take a General Examination which tests for overall mastery of the subject matter. Upon passing the General Examination, work begins on a Specialist Essay, normally focused on theoretical and/or topical issues of relevance to the forthcoming dissertation. The purpose of the Specialist Essay is to demonstrate a capacity for independent research of high quality. By the end of the third year of study, the essay should be complete, language requirements satisfied, and a proposal for dissertation research drawn up.

Language Requirement. A reading knowledge of at least one foreign language must be demonstrated by examination and by writing a research paper or dissertation in which sources in the chosen language contribute to the research. The examination part of this requirement must be passed before the student may be admitted to candidacy for the Ph.D.

Summer Training Program. Contingent upon the availability of funding, a program of fieldwork under faculty supervision is carried out during the summer following a student's first year of residence.

Admission to Candidacy. A student is admitted to candidacy for the Ph.D. upon satisfactory completion of 1) sixteen half-courses, including all the required courses, 2) a General Examination in anthropology, 3) the reading examination in a foreign language, and 4) the Specialist Essay.

Dissertation Research. As soon as possible after admission to candidacy, the student should begin at least a full year of research consisting of fieldwork and/or laboratory analysis. In exceptional cases library research may be substituted. This research forms the basis for a doctoral dissertation.

Dissertation and Defense. The department will recommend to the Dean of the Graduate School that a Ph.D. be awarded the candidate upon formal acceptance of a dissertation and after its successful defense in a Final Oral Examination. Details of the regulations for certifying approval of the dissertation and for the Final Oral Examination are found in earlier pages of this catalog.

Courses of Instruction

***ANTHROPOLOGY 100a. The Family in the Political Economy of Latin America**

ANTHROPOLOGY 101b. Special Topics in Anthropology: Medical Anthropology

The purpose of this course is to study the relationship between stress and mental health and physical well-being. It will look at the connection between crises and the "natural" support systems for those undergoing transitions such as becoming a parent, losing a job, getting divorced, entering college, and bereavement. The conditions which influence the availability and use of support will be considered. Important aspects of this course will be to discuss the concepts of stress and support and to review research concerning relationships between crises, support and coping behavior. *Mr. Jacobson*

ANTHROPOLOGY 102a. Anthropological Linguistics I

A general introduction to anthropological perspectives on language. Topics will include: the organization of language as a communicative system; language in human evolution; linguistic approaches to cultural meaning and world-view; historical perspectives on language (language change, history and pre-history). *Ms. Irvine*

***ANTHROPOLOGY 102b. Anthropological Linguistics II**

ANTHROPOLOGY 103b. Language, Society and Culture

A seminar on selected topics in the study of language use, such as language in social interaction; the relationship of a language to thought; verbal art; the ethnography of speaking. Previous knowledge of linguistics useful but not required. *Ms. Irvine*

***ANTHROPOLOGY 104a. Hesiod's *Works and Days*: Convergent Approaches of Classics and Anthropology**

***ANTHROPOLOGY 104b. Hesiod's *Theogony*: Convergent Approaches of Classics and Anthropology**

ANTHROPOLOGY 105a. Symbol, Myth and Ritual

Though the mythology of Ancient Greece is perhaps the best known, in fact every culture has its myths. Beginning with the study of mythologies in small-scale and classless societies, where they are the only social expression of reality, the course reveals the characteristics and the mechanisms of mythical thought and introduces a way of understanding myths. This method is then used to examine the mythological system of other and more complex societies. Special emphasis is given to the elucidation of mythical symbolism and the necessity of relating myths to rituals. The course ends with the comparison of the religions of several social systems. *Mr. Jacopin*

***ANTHROPOLOGY 106b. Friendship**

ANTHROPOLOGY 107a. Culture, Ecology and Human Disease

This course is a general treatment of medical ecology. Topics include a basic introduction to epidemiology, disease evolution, disease and development, and malnutrition and disease. Special attention will be paid throughout the course to the interaction of culture and disease, and several examples of changing patterns of disease associated with cultural change will be examined in detail. *Mr. Gomberg*

ANTHROPOLOGY 108b. Greek Mythology

Initiation into the fantastic world of Greek mythology. Studying a wide range of myths, many unfamiliar and not in literary sources, this course will introduce procedural and conceptual tools to reveal their symbolic meaning. The myths will be situated in their proper cultural, aesthetic, and historical contexts. The course ends with the contribution of Greeks to the end of mythological thought and the birth of scientific thought.

Messrs. Jacopin and Muellner

ANTHROPOLOGY 109b. Archaeological Methods

Basic procedures for the design and implementation of archaeological research. Topics to be covered include: field methods for survey, sampling, site mapping and excavation; techniques of identification, classification, dating and preservation of archaeological materials; principles for interpreting the significance of ancient remains. Weather permitting, several work sessions at a nearby archaeological site will provide some actual field experience. *Mr. Zeitlin*

***ANTHROPOLOGY 110b. Introduction to Human Evolution**

***ANTHROPOLOGY 111a. Introduction to Primate Studies**

***ANTHROPOLOGY 112b. Evolution and Natural Selection**

ANTHROPOLOGY 113aR. Human Variation

An introduction to human biological variation. Differences between individuals and populations within human species in biological characteristics (body build, blood groups, skin color) will be analyzed using an adaptive approach. The utility of the racial model to understanding human variation will be evaluated and compared to that of other approaches. Several politically and socially controversial topics relating to human varia-

tion (race and I.Q., sociobiology) will be discussed late in the semester. *Mr. Gomberg*

***ANTHROPOLOGY 115a. Biocultural Adaptation**

ANTHROPOLOGY 116a. Human Osteology

This course is an introduction to human musculo-skeletal anatomy. After learning the names and locations of the major bones and muscle groups, the manner in which these anatomical structures interact to produce movement will be examined. Movements at each of the major joints of the human body will be discussed and integrated into an analysis of human locomotion and posture. *Mr. Gomberg*

ANTHROPOLOGY 120b. The Anthropology of Law

A comparative study of the relationship between law, society and culture, including the socio-cultural contexts in which various types of legal institutions, procedures, rules and concepts are found and the relationships between the law and change. *Mr. Davis*

ANTHROPOLOGY 123aR. Directions and Issues in Archaeology

***ANTHROPOLOGY 122a. The World Before Civilization**

ANTHROPOLOGY 123a.R Directions and Issues in Archaeology

An examination of concepts involved in the archaeological study of prehistoric societies. Selected cases will be discussed as illustrations of major theoretical and methodological issues. Permission of instructor required. *Mr. Zeitlin*

ANTHROPOLOGY 124. Archaeology of the Aegean and Near East

See CLORS 100.

Mr. Todd

ANTHROPOLOGY 125bR. Investigations in an Unfamiliar Language

See Linguistics 122bR.

Ms. Irvine

ANTHROPOLOGY 126a. Kinship

Kinship is a vital principle of social organization in all societies in the world. In our examination of this classic topic in anthropology we will look at kinship systems and structures in both small-scale and complex societies; marriage, residence, terminology, age and sex roles, descent group and alliance theories; methodological issues. *Mr. Jacopin*

***ANTHROPOLOGY 129b. The Evolution of Culture and Society**

***ANTHROPOLOGY 130. The Archaeology of Syria-Palestine**

See CLORS 111

Mr. Todd

***ANTHROPOLOGY 133a. Modern Africa**

ANTHROPOLOGY 133b. Anthropological Fieldwork

An introduction to the theory and practice of fieldwork. The course will include discussion of classic and contemporary accounts of doing ethnographic research. Students will conduct supervised fieldwork in Waltham, Cambridge, Boston or other local areas, with the aim of producing an ethnographic case study. *Mr. Jacobson*

ANTHROPOLOGY 135b. Peoples and Cultures of India

An introduction to patterns of thought and action in rural India, with special emphasis on Hindu communities. *Mr. Davis*

***ANTHROPOLOGY 139b. Biography and Culture**

***ANTHROPOLOGY 140a. North American Indians Before the Europeans**

***ANTHROPOLOGY 141b. The American Indian**

***ANTHROPOLOGY 143b. Modern Culture of Middle America**

***ANTHROPOLOGY 144a. Indians of South America**

***ANTHROPOLOGY 146a. Environment and Archaeology**

***ANTHROPOLOGY 147b. Archaeology and Ethnohistory of Mesoamerica**

ANTHROPOLOGY 148aR. Rise, Function and Fall of Early Civilizations: Concepts and Explanations

Regularities in the ways large-scale non-modern societies work—and fail to work. Why did large scale societies develop at all? What uniformities and what variations are exhibited by different instances? Why and how did they collapse? Ethnographic and historical data and leading anthropological theories will be reviewed, as well as archaeological evidence from Mesoamerica, Mesopotamia, China, Egypt and Peru. *Mr. Cowgill*

ANTHROPOLOGY 151a. Social Organization I

Theories of social organization, the interrelations of social institutions, current anthropological methods of interpretation and analysis. *Mr. Saler*

ANTHROPOLOGY 151b. Social Organization II

A continuation of 151a. This course will emphasize structural analysis. Designed primarily for advanced undergraduate and graduate students.

Permission of instructor required.

Mr. Jacopin

ANTHROPOLOGY 152b. Comparative Political Economy

This course will compare and contrast the political economy of pre-industrial societies with that of industrial societies and will be especially concerned with the transition from the former to the latter. Although some attention will be paid to primitive societies, emphasis will be on peasant economies. Marxist, formalist and substantive approaches to political economy will be contrasted. *Mr. Kaplan*

***ANTHROPOLOGY 153a. Primitive Art**

ANTHROPOLOGY 154a. Comparative Religion

An exploration of world view and ritual both in “world” or “historical” faiths (such as Buddhism and Islam) and in so-called “primitive” societies with reference to theories concerning the origins and functions of religion. *Mr. Saler*

ANTHROPOLOGY 154b. Selected Topics in Comparative Religion

Topic for 1982-83: Seminal works in the study of religion.

Mr. Saler

***ANTHROPOLOGY 155b. Psychological Anthropology**

ANTHROPOLOGY 156a. Political Anthropology

A survey of major anthropological approaches to the study of politics.

Mr. Davis

ANTHROPOLOGY 158a. Urban Anthropology

Comparative study of strategies used in coping with the complexity and potential danger of urban life. Attention will also be given to analyzing and evaluating the theories, methods and data anthropologists and others use in their studies of urban social organization. *Mr. Jacobson*

***ANTHROPOLOGY 158b. Selected Topics in Urban Anthropology**

***ANTHROPOLOGY 161b. Culture and Cognition**

***ANTHROPOLOGY 162a. Anthropology and Psychoanalysis**

ANTHROPOLOGY 165a. Modernization and Social Change

Exploration of selected problems and processes of modernization with reference to both the “developed” and the “underdeveloped” states and the relationships between them. *Ms. Robinson*

ANTHROPOLOGY 166aR. The Nature of Human Nature

This course will deal with various theories of human nature and the evidence for such theories. It will explore the way in which theories of the nature of man have figured in interpretations of culture. The course addresses the question: to what extent is culture the expression of nature and to what extent does it depart from nature? *Mr. Kaplan*

***ANTHROPOLOGY 170a. Peasant Cultures: Past and Present**

ANTHROPOLOGY 171a. The Comparative Method

Relativism is the fundamental problem of social science and all cross-system investigation must confront it. Insider-outsider, emic-etic equivalence and other forms will be considered. The major solutions to the problem will be evaluated. *Mr. Hunt*

***ANTHROPOLOGY 175a. Pro-Seminar in Anthropological Theory: I**

***ANTHROPOLOGY 175b. Pro-Seminar in Method in Cultural Anthropology: II**

***ANTHROPOLOGY 177b. Archaeological Method and Theory**

***ANTHROPOLOGY 180b. Historical Anthropology**

***ANTHROPOLOGY 186a. Mathematical and Computer Methods in Anthropology**

***ANTHROPOLOGY 186b. Mathematical and Computer Methods in Anthropology**

ANTHROPOLOGY 188. Materials in Ancient Societies: Lithics

A full year, inter-university course whose theme is the role of different materials and technologies in the development of ancient societies. Each year's seminar and laboratory focus is on the scientific analysis of a particular class of archaeological objects and their contribution to cultural interpretation. In 1982-83, ceramics will be the topic. The course will include techniques such as x-ray diffraction, petrographic analysis, and trace element analysis; study of physical properties, processing and firing techniques; and socio-economic aspects of production. All students will undertake analytical projects on archaeological collections. *Ms. Zeitlin, Brandeis Coordinator*

***ANTHROPOLOGY 190a. Comparative Social Stratification**

***ANTHROPOLOGY 193b. Research Design**

Primarily for Graduate Students

***ANTHROPOLOGY 210a. Seminar on Conflict Resolution in Peasant Societies**

***ANTHROPOLOGY 210b. Special Topics in Anthropological Analysis**

ANTHROPOLOGY 226a and b. Readings and Research in Archaeology

Staff

ANTHROPOLOGY 227a. Readings in Research in Linguistics

Introduction to Linguistic Anthropology, primarily for graduate students in anthropology, emphasizing the contribution of languages and linguistics to general anthropological issues. *Ms. Irvine*

ANTHROPOLOGY 228a and b. Advanced Readings in Method and Theory *Mr. Kaplan*

ANTHROPOLOGY 229a and b. Guided Comparative and Historical Research

Mr. Hunt

ANTHROPOLOGY 230a and b. Readings and Research on Culture of Hunters and Gatherers

Mr. Jacopin

ANTHROPOLOGY 231a and b. Readings in Cognitive Culture

Mr. Saler

ANTHROPOLOGY 232a and b. Readings in Law

Mr. Davis

ANTHROPOLOGY 233a and b. Readings and Research in Symbolic Anthropology

Mr. Jacopin

ANTHROPOLOGY 234a and b. Readings and Research in Political Anthropology

Mr. Davis

ANTHROPOLOGY 235a and b. Readings and Research in Latin American Cultures

Mr. Hunt

- ANTHROPOLOGY 236a.** Readings and Research of East and South Asia
Ms. Robinson
- ANTHROPOLOGY 237b.** Readings and Research in African Cultures
Mr. Jacobson
- ANTHROPOLOGY 238b.** Readings and Research in Urban Anthropology
Mr. Jacobson
- ANTHROPOLOGY 239a and b.** Readings and Research In North American Indian Cultures
Staff
- ANTHROPOLOGY 240b.** Readings and Research in Medical Anthropology
Mr. Jacobson
- ANTHROPOLOGY 245a and b.** Readings and Research in Physical Anthropology
Mr. Gomberg
- ANTHROPOLOGY 253a.** Readings in Economic Anthropology
Mr. Kaplan
- *ANTHROPOLOGY 300a and b.** Seminar in Anthropological Field Work
- ANTHROPOLOGY 302.** Summer Research Training
Field work for three months during the summer under the supervision of a member of the staff.
Staff
- ANTHROPOLOGY 304a and b.** Readings and Research in Anthropological Field Methods
Staff
- ANTHROPOLOGY 305.** Anthropology Colloquium
Staff
- ANTHROPOLOGY 400-412.** Dissertation Research
Independent research for the Ph.D. degree.
- | | | |
|--------------------------|--------------------------|----------------------------|
| 401. <i>Mr. Cowgill</i> | 405. <i>Ms. Irvine</i> | 410. <i>Mr. Davis</i> |
| 402. <i>Mr. Jacobson</i> | 407. <i>Mr. Kaplan</i> | 411. <i>Ms. J. Zeitlin</i> |
| 403. <i>Mr. Hunt</i> | 408. <i>Ms. Robinson</i> | 412. <i>Mr. R. Zeitlin</i> |
| 404. <i>Mr. Gomberg</i> | 409. <i>Mr. Saler</i> | |

BIOCHEMISTRY

Objectives

The graduate program in biochemistry leading to the degree of Doctor of Philosophy is designed to equip students with a broad understanding of the chemistry involved in biological processes and to train them to carry out independent original research. Although students will be primarily responsible for a comprehensive understanding of biochemical phenomena, they will be encouraged to acquaint themselves with the disciplines of biology and chemistry. Research and experimental projects rather than formal course training will be emphasized. The student will, however, be requested to take courses in advanced biochemistry, physical biochemistry, biochemical techniques, molecular biology and biochemistry seminars, as well as one advanced course in chemistry or biology. The choice of advanced biochemistry courses and those of other scientific disciplines (i.e., organic chemistry, genetics, embryology, etc.) are subject to the student's particular interests. The choice of research programs should be in areas under investigation by the faculty; some of these fields include metabolic regulation in normal and also tumor tissues, enzymology, immunochemistry, molecular biology, molecular pharmacology, biochemical genetics, bacterial and phage genetics, physical chemistry of macromolecules, protein chemistry, plant and virus metabolism, problems in growth and differentiation, microbial metabolism, organic biochemistry, membrane transport and energy coupling mechanisms, application of NMR to biochemical problems, biochemistry of muscle, and chromosome structure.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply here. Applicants for admission to the Biochemistry Department are also required to take the Graduate Record Examination. It is strongly suggested that the applicant take one of the advanced sections (preferably chemistry or biology) of this examination. The student's undergraduate curriculum should include some fundamental courses in biology and chemistry which will be subject to final staff approval.

Faculty

Professor Robert H. Abeles, *Chair*: Mechanism of enzyme action. Design of highly specific enzyme inactivators. Design of inhibitors with potential pharmacological significance. Mechanism of drug action.

Professor Gerald D. Fasman: Conformation of biological macromolecules. Chromatin structure, protein-DNA interactions. Protein models; synthesis and conformational studies of polyamino acids.

Professor Thomas C. Hollocher, Jr.: Role and mechanism of action of oxidation-reduction enzymes. Mechanism, enzymology and pathway of nitrogen in denitrification and nitrification.

Professor William P. Jencks: Mechanisms of reactions catalyzed by enzymes, coenzymes, and by chemical catalysts. Mechanisms, catalysis and equilibria of reactions of "energy-rich" compounds of importance in biochemistry and chemistry. Mechanisms of conversion of chemical energy into osmotic and mechanical work.

Professor Lawrence Levine: Immunochemistry. Antibodies as analytical reagents for measuring pharmacologically important molecules. Mechanisms of arackidomic acid metabolism by cells in culture.

Professor John M. Lowenstein: Role of phospholipids in hormone action. Regulation of metabolic pathways. Regulation and function of the purine nucleotide cycle; regulation of adenosine production in heart.

Professor Susan Lowey: Structure and function of myofibrillar proteins and their relation to the muscle cell. Techniques will include physical chemistry, protein chemistry, fluorescence and electron microscopy.

Professor Alfred G. Redfield: Magnetic resonance in biopolymers. Physical biochemistry.

Professor Robert F. Schleif: Molecular genetics. Mechanism of gene regulation as studied by genetic, physiological and physical chemical means.

Professor Serge N. Timasheff: Physical chemistry of proteins, in particular, structure in solution and self-associations; self-assembling systems; ligand-mediated interactions; macromolecular properties of biological polymers.

Professor Helen Van Vunakis: Interaction of hallucinogenic, narcotic and carcinogenic compounds with specific antibodies and natural receptors. Nicotine metabolism and physiological effects.

Associate Professor Irwin B. Levitan: Neurobiology. Neurobiochemistry. Regulation of neuronal membrane properties.

Associate Professor Christopher Miller: Cellular physiology and biophysics. Membrane transport and mechanisms of electrical excitation.

Associate Professor William T. Murakami: Biochemistry of virus infection. Metabolism of virus-infected cells. Purification and characterization of polyoma viruses.

Associate Professor Pieter Wensink: Molecular biology. Gene expression during development of higher organisms. The physical arrangement of genes within the DNA and the chromosomes of higher organisms.

Assistant Professor Vivian Ernest: Mechanism and regulation of eukaryotic protein synthesis.

Degree Requirements

Doctor of Philosophy

Program of Study. Each doctoral candidate must satisfactorily complete the following fundamental courses: advanced biochemistry, biochemical techniques, physical biochemistry and biochemical research problems, and four of the biochemistry seminars.

Financial Support. Graduate students currently receive financial support for a period of four years. Support for the fifth year or beyond is arranged with the research supervisor. The initial four-year support is contingent upon teaching for a maximum of two semesters. Teaching does not require laboratory supervision.

Language Requirements. There is no foreign language requirement for the Ph.D. degree.

Qualifying Examinations. An oral qualifying examination must be taken generally at the beginning of the second year. In this examination, the student will be asked to defend or refute two propositions. One proposition will be assigned in an area of research outside the student's immediate area of specialization, and one will be an original proposition put forth by the student for a research problem in his or her area of interest (this is not necessarily a problem upon which he or she will carry out research).

In addition, the student will have an opportunity to demonstrate general knowledge of biochemistry in a series of three area examinations: physical biochemistry and macromolecules, metabolism and enzymology, and molecular biology. Students are expected to have taken three examinations by the end of the third year; two of these must be taken by the end of the second year. This general knowledge outside the student's own field of specialization must be demonstrated to the satisfaction of an advisory committee of four Department faculty members.

At this time it will be decided whether a student will continue working towards the Ph.D. degree or a Master of Arts degree.

Admission to Candidacy. At some time before the second semester of their third year, students will present to a committee of four members of the Department a summary of their research accomplished to date, including the most significant experimental data and detailed plans for the completion of a research project. The committee will recommend whether the research project should be continued as a partial fulfillment of the requirements for the Doctor of Philosophy degree. After completion of the research report and the three area examinations at a level satisfactory for the Ph.D. degree, the student will be admitted to candidacy.

Dissertation and Defense. A dissertation will be required which summarizes the results of an original investigation of an approved subject and which demonstrates the competence of the candidate in independent research.

Courses of Instruction

BIOCHEMISTRY 100a. Introduction to Biochemistry

Chemistry, reaction and metabolism of biologically important compounds. Formation and utilization of "energy-rich" compounds. Introduction to enzyme mechanisms. An attempt will be made to interrelate and compare basic biochemical and chemical processes. Metabolic regulation.

Prerequisite: Chemistry 25a and b.

Section 1: Mr. Hollocher

Section 2: Messrs. Abeles and Jencks

BIOCHEMISTRY 100aR. Introductory Biochemistry

See Biochemistry 100a.

Mr. Murakami and Ms. Ernst

BIOCHEMISTRY 101a and b. Advanced Biochemistry

A discussion of enzyme reactions including energetics, kinetics, and reaction mechanism. Metabolism of carbohydrates, lipids, amino acids, nucleic acids, vitamins and coenzymes, hormones and inorganic substances. Coupled enzyme reactions, such as oxidative phosphorylation, and the synthesis of macromolecules such as glycogen, protein and the nucleic acids. Regulated enzymes and the regulation of metabolism.

Prerequisites: Chemistry 25a and b, Biochemistry 100a or their equivalent.

Messrs. Abeles and Jencks

BIOCHEMISTRY 103a. Advanced Molecular Biology

The fundamental principles of molecular biology will be stressed with respect to nucleic acid biosynthesis, structure, and physiological involvement. In addition, a description of events dealing with control of genetic information will be outlined.

Mr. Schleif

BIOCHEMISTRY 104b. Introduction to Physical Biochemistry

Discussion of physical methods; molecular interactions; solvent effects; principles of folding; structural and conformational analyses by various spectroscopic and X-ray techniques.

Mr. Miller and Staff

BIOCHEMISTRY 200. Biochemistry Techniques

Prerequisite: Biochemistry 101. May be taken concurrently.

Mr. Jencks and Staff

BIOCHEMISTRY 202b. Chemistry of Enzyme-Catalyzed Reactions

This course will deal with reaction mechanisms and mechanisms of catalysis in aqueous solution, some of which are relevant to enzymic catalysis.

Mr. Jencks

Seminars

One or two seminars will be given each semester. Each student will present an oral and written report on one aspect of the following topics.

BIOCHEMISTRY 219b. Mechanism of Enzyme Action

Messrs. Abeles and Jencks

BIOCHEMISTRY 221a. Hormonal Regulation

Mr. Lowenstein

BIOCHEMISTRY 222b. Microbial Redox Transformations of Oxygen, Nitrogen, Sulfure, Metal Ions, Ci-compounds

Mr. Hollocher

BIOCHEMISTRY 231a. Molecular Aspects of Membrane Phenomena

Mr. Miller

BIOCHEMISTRY 401-419. Biochemical Research Problems

Independent research for the Ph.D. degree.

- | | | |
|----------------------------|-----------------------------|--------------------------|
| 401. <i>Mr. Jencks</i> | 408. <i>Mr. Wensink</i> | 416. <i>Mr. Redfield</i> |
| 402. <i>Mr. Levine</i> | 409. <i>Ms. Lowey</i> | 417. <i>Ms. Ernst</i> |
| 404. <i>Mr. Timasheff</i> | 411. <i>Ms. Van Vunakis</i> | 418. <i>Mr. Miller</i> |
| 405. <i>Mr. Abeles</i> | 413. <i>Mr. Hollocher</i> | 419. <i>Mr. Levitan</i> |
| 406. <i>Mr. Fasman</i> | 414. <i>Mr. Murakami</i> | |
| 407. <i>Mr. Lowenstein</i> | 415. <i>Mr. Schleif</i> | |

Journal Club, Colloquia, and Research Clubs

In addition to the formal courses announced above, all graduate students are encouraged to participate in the Department's Journal Club and colloquia. The Journal Club is an informal meeting of the students, staff and post-doctoral fellows, at which recent publications are discussed. Colloquia are general meetings of the Department in which both speakers from the Department and guest speakers will present their current investigations. Research clubs are organized by various research groups of the Department.

BIOLOGY

Objectives

The graduate program in biology is designed to give students an understanding of the fundamental nature of living processes, and to train them to undertake original research.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. The student's undergraduate record should ordinarily include courses equivalent to those required of undergraduates concentrating in biology at this institution. These are: general biology, genetics, cell physiology, developmental biology, and at least two additional elective courses. Students who are deficient in some of these subjects, but whose records are otherwise superior, may make up their deficiencies while they are enrolled as graduate students. In exceptional cases, students may be excused from some of these requirements. Students with serious deficiencies must, however, expect to add additional time to their graduate program in order to satisfy the deficiencies.

It is strongly recommended that applicants take the Graduate Record Examination.

On being admitted to the Biology Department, graduate students will report to the temporary graduate student advisor who will assist the student with formal entry into the department and later with their programs.

An important part of graduate training consists of laboratory experience. Since the summer months provide an opportunity for such work, unbroken by courses and other responsibilities, it is customary for graduate students to spend their summers doing research. In recognition of this, the Biology Department provides summer stipends for its full-time graduate students.

Faculty

Professor Chandler M. Fulton, Chair: Cell differentiation and selective gene expression in eucaryotic cells. Morphogenesis of cell shape and of cell organelles, especially flagella.

Professor Carolyn Cohen (Rosenstiel Center): Structure and function of protein assemblies in cells. X-ray diffraction and electron microscopy applied to muscle contraction, cell division and blood coagulation.

Professor David J. DeRosier (Rosenstiel Center): Structural molecular biology. X-ray crystallography.

Professor Herman T. Epstein: Developmental changes in the brain in relation to learning in man and mouse.

Professor Martin Gibbs (Photobiology Institute): Photosynthesis and plant physiology.

Professor Harlyn O. Halvorson (Director, Rosenstiel Center): Developmental changes in microorganisms. Control of macromolecular synthesis during the cell cycle and during sporulation in bacillus.

Professor Attila O. Klein: Regulation of development in higher plants by light. Control of growth, organelle development and macromolecular synthesis in the leaf.

Professor Alfred Nisonoff (Rosenstiel Center): Immunochemistry. Genetic control of the immune response.

Professor Jerome A. Schiff (Director, Photobiology Institute): Plant biochemistry and physiology. Photocontrol of intracellular development. Sulphur metabolism.

Professor Andrew G. Szent-Gyorgyi: Mechanism of muscle contraction. Regulation of contractile proteins in both primitive and more advanced animals.

Associate Professor James E. Haber (Rosenstiel Center): Control of meiosis sporulation-specific events in the yeast *Saccharomyces cerevisiae*. Genetic and biochemical studies of macromolecular synthesis, especially during development.

Associate Professor Jeffrey C. Hall: Genetic and histochemical mosaic analysis of behavior mutants of *Drosophila melanogaster*.

Associate Professor John E. Lisman: Mechanisms of excitation and adaptation in photo-receptors.

Associate Professor Joan L. Press (Rosenstiel Center): Developmental immunology.

Associate Professor Michael Rosbash: Gene organization in eucaryotes. Macromolecular synthesis during oogenesis.

Assistant Professor Kathleen M. Karrer: Molecular analysis of germ line development.

Assistant Professor Eve E. Marder: Neurotransmitter-receptor interactions, using a combination of physiological, pharmacological and biochemical approaches.

Assistant Professor Eric Selsing: Immunology.

Assistant Professor Robert D. Stout (Rosenstiel Center): Cellular immunology.

Adjunct Assistant Professor Judith E. Tsipis: Virology.

Assistant Professor Lawrence J. Weng: Control of gene activity, purification of estrogen receptors and Vitellogenin synthesis.

Assistant Professor Kalpana P. White: Developmental neurobiology.

Degree Requirements

At least one year of teaching experience (or equivalent) is required of all degree candidates.

Master of Arts

The goal of the Biology Department is to train students in original research on the level of the Ph.D. Only rarely do we accept candidates for a master's degree.

Program of Study. The program leading to the M.A. degree in Biology requires course work and a research thesis. The student's program will be set up by the Graduate Committee of the department. The candidate must complete the equivalent of one full year of graduate study at Brandeis University, normally computed at a minimum of eight half-courses of approved study which include research courses. The candidate must pass the prescribed courses and submit an acceptable thesis.

Language requirements. There is no foreign language requirement for the master's degree.

Doctor of Philosophy

Program of Study. All students will be expected to obtain a knowledge of the principles and techniques of the five areas represented in the department, i.e., genetics, developmental biology, neurobiology, immunology and cell biology, before taking the qualifying examination. The background a student is expected to have in these areas will be covered in courses given by the department. Entering students will be encouraged to do research rotations in at least two different laboratories. The student will be expected also to have additional background in his or her area of specialization as well as experience in seminar and research courses to be designated.

Each student will choose his or her specific field of interest and will apply for a permanent adviser to be agreed upon by the department before the end of the second year. The adviser will assist the student in planning a well-balanced program in his or her specific field of interest. In addition, the adviser will ordinarily serve as the chairman of the student's dissertation examining committee.

Language requirement. There is no foreign language requirement for the Ph.D. degree.

Qualifying Examination. Ordinarily this examination is taken in the middle of the second year of study. Subsequent to the written portion of the examination, a proposition committee is formed and the student must submit and defend two propositions from two areas. The student will be examined orally on the two propositions by the three members of the proposition committee.

Admission to Candidacy. To be admitted to candidacy, the student must have (a) passed the qualifying examination, (b) been accepted by a graduate adviser.

Dissertation and Defense. Each student will conduct an original investigation. With the approval of the student's adviser, however, research courses may be elected at any time. After submission of the dissertation, the candidate will be expected to present the principal results of his or her work and its significance during an examination in defense of the dissertation.

Courses of Instruction

BIOLOGY 100a. Photobiology

See Photobiology 100a.

Messrs. Gibbs, Schiff and Staff

BIOLOGY 100b. Photobiology of Cells and Organelles II

See Photobiology 100b.

Messrs. Gibbs, Schiff and Staff

BIOLOGY 102b. Cell Biology from a Structural Perspective

This course examines cell architecture and function, making use of simple physical and chemical concepts. The first part deals with design of proteins, nucleic acids and lipids, and with methods for visualizing structure (including microscopy and X-ray diffraction). We then apply this material to a study of organized cell systems such as muscles, membranes and chromatin. The course is appropriate for juniors and seniors majoring in the sciences, and first-year graduate students.

Ms. Cohen

BIOLOGY 121a. Advanced Genetics

A deeper and more detailed discussion of topics introduced in Biology 21. Two basic approaches will be emphasized: cytogenetics and molecular genetics. Problems currently under investigation will be discussed.

Prerequisite: Biology 21 and 31.

Mr. Haber

BIOLOGY 124bR. Animal Virology

A series of lectures and readings, with student participation, on some aspect of animal virology. Topics to be covered are: techniques and inhibitors used in virology; survey of replication of some of the animal viruses; brief discussion of medical aspects of virology.

Ms. Tsipis

BIOLOGY 142a. Neurobiology

The course is designed as an introduction to the field of neurobiology. Original papers and a textbook will provide readings. Topics to be covered will include membrane electrophysiology, synaptic transmission, sensory processing, generation of motor patterns and neuronal plasticity. For graduate students with little or no previous course work.

Ms. Marder

***BIOLOGY 150a. Gene Structure and Function**

BIOLOGY 161b. Developmental Genetics

The course will consider the use of classical genetics, cytogenetics and molecular genetics in the analysis of developmental problems. Developmental processes such as oogenesis, embryogenesis and gene amplification will be used as framework for discussion of such genetic techniques as gynandromorph mapping, somatic recombination, cytoplasmic and cellular transplantation, *in situ* hybridization, somatic cell recombination, etc.

Readings will be assigned from the literature. Course requirements: one paper, one class presentation and a final examination.

Ms. White

BIOLOGY 165b. Advanced Development

This is an advanced topics course which deals with developmental biology from a molecular point of view. The main focal point is the molecules which are instructional — or might be instructional — for the developmental modulation of gene expression and morphogene-

sis. Selected topics include: DNA organization in eukaryotes, control of gene expression, hormone action, developmental genetics, pattern formation, mouse mutants and development, and inductive interactions.

Two 1½ hour meetings per week. Course is part lecture and part discussion. All readings from current literature, 2 to 5 papers per class. Final examination and paper. Active participation in class is a requirement and will contribute to final grade. *Mr. Rosbash*

BIOLOGY 175b. Advanced Immunobiology

Recent advances in immunobiology. The format will include lectures to introduce the subject material and a detailed analysis with student participation of papers in the current literature. Topics which will be considered include: lymphocyte subsets-differentiation, heterogeneity, function, phenotypes, and antigen receptors; requirements for and mechanisms of lymphocyte activation by antigen; the regulatory mechanisms permitting/preventing immune responsiveness; genetic restrictions in lymphocyte interactions, with emphasis on the role of genes in the species' major histocompatibility complex; and the cellular basis for transplantation and tumor immunity.

Permission of instructor required.

Mr. Stout

BIOLOGY 200a. Proseminar: Behavioral Genetics

Mr. Hall

BIOLOGY 245a. Selected Topics in Plant Metabolism

See Photobiology 245a.

Mr. Gibbs

BIOLOGY 245b. Comparative Physiology and Biochemistry of Plants

See Photobiology 245b.

Mr. Schiff

***BIOLOGY 275b. Molecular Immunology**

Courses in Research

BIOLOGY 300a and b. Biological Research

Primarily for the first year student with the purpose of introducing him or her to biological research and to the work in progress in the laboratories of a number of faculty members. In consultation with the graduate adviser, the student plans a sequence of such tenures, each comprising six weeks or more, and then carries out experimental investigations under the guidance of the faculty members involved.

Staff

BIOLOGY 400. Biophysics of Microorganisms

Mr. Epstein

BIOLOGY 402. Molecular Biology of Microorganisms

Mr. Halvorson

BIOLOGY 403. Immunochemistry: Genetic Control of the Immune Response

Mr. Nisonoff

BIOLOGY 404. Developmental Neurobiology

Ms. White

BIOLOGY 405. Cell Differentiation and Morphogenesis

Mr. Fulton

BIOLOGY 406. Neurophysiology

Ms. Marder

BIOLOGY 407. Structural Aspects of Contractile Systems, Cell Division and Blood Coagulation

Ms. Cohen

BIOLOGY 408. Behavioral Genetics

Mr. Hall

BIOLOGY 409. Biophysics of Visual Transduction

Mr. Lisman

BIOLOGY 410. Plant Development

Mr. Klein

BIOLOGY 411. Gene Control in Vitellogenin

Mr. Wangh

BIOLOGY 412. Structural Molecular Biology

Mr. DeRosier

BIOLOGY 413. General Physiology

Mr. Szent-Gyorgyi

BIOLOGY 414. Gene Organization in Eukaryotes. Macromolecular Synthesis During Oogenesis

Mr. Rosbash

BIOLOGY 415.	Biochemistry and Genetics of Differentiation	<i>Mr. Haber</i>
BIOLOGY 416.	Molecular Analysis of Germ Line Development	<i>Ms. Karrer</i>
BIOLOGY 417.	Cellular Immunology	<i>Mr. Stout</i>
BIOLOGY 418.	Developmental Immunology	<i>Ms. Press</i>
BIOLOGY 419.	Immunology	<i>Mr. Selsing</i>

Biology Journal Clubs

There will be a number of informal Journal Clubs which deal with various topics of concern to the various specialties. These will meet regularly under the auspices of the staff. Students, depending upon their individual needs, may be required to attend.

Institute for Photobiology of Cells and Organelles

Objectives

The graduate program of the Institute is designed to give students an understanding of the photobiology of cells and organelles as part of the fundamental nature of living processes, and to train them to undertake original research in these areas.

The Institute rarely admits a graduate student who desires a master's degree. Such candidates may, however, be admitted at the discretion of the faculty as exceptional cases. A Master of Arts degree may be granted on completion of a designated program to be arrived at after consultation with the graduate adviser.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. The student's undergraduate record should ordinarily include courses equivalent to those required of undergraduates concentrating in biology or biochemistry at this institution. These are: general biology, genetics, cell physiology and biochemistry, developmental biology, and at least two additional elective courses. Students who are deficient in some of these subjects but whose records are otherwise superior may make up their deficiencies while they are enrolled as graduate students. In exceptional cases, students may be excused from some of these requirements. Students with serious deficiencies must, however, expect to add additional time to their graduate program in order to satisfy the deficiencies.

It is strongly recommended that applicants take the Graduate Record Examination.

On being admitted to the Institute, graduate students will be advised and aided in planning their programs.

An important part of graduate training consists of laboratory experience. Since the summer months provide an opportunity for such work, unbroken by courses and other responsibilities, it is customary for graduate students to spend their summers doing research.

Faculty

Professor Jerome A. Schiff, Director: Plant biochemistry and physiology. Photo-control of intracellular development. Sulphur metabolism.

Professor Martin Gibbs: Photosynthesis and plant physiology.

Degree Requirements

At least one year of teaching experience is required of all degree candidates.

Master of Arts

Program of Study. The program leading to the M.A. in biology focuses primarily on the research capability of the student. Specifically, the primary requirement for the degree is the completion of a thesis based on original laboratory work which is acceptable to the Institute. In general, the preparation for an original research problem will necessitate the enrollment of a student in course work. The specific number and types of courses will vary, depending on the ultimate research problem, and will be prescribed by the Institute. The candidate must, however, complete the equivalent of one full year of graduate study at Brandeis University, ordinarily computed at a minimum of eight half-courses of approved study.

By the end of the first year, each graduate student will choose a specific field of interest and will apply to the Director of the Institute for a permanent adviser to be assigned by the Institute. This adviser will serve as the chairman of a committee which will advise the student on courses to be taken and guide him or her throughout the thesis problem.

Language Requirement. There is no foreign language requirement for the master's degree.

Qualifying Examination. At the discretion of the student's advisory committee, a qualifying or comprehensive examination may be required.

Doctor of Philosophy

Program of Study. All students are expected to obtain a knowledge of the principles and techniques of the areas of: biochemistry and physiology (with emphasis on metabolism); genetics, regulation, DNA and repair; development; photobiology and molecular structure, structure in relation to function, photochemistry, microbiology and evolution (the five proposition areas of the qualifying examination). Proficiency in those areas of chemistry and physics related to photobiology is also expected. This knowledge will be acquired during the first two years through courses, seminars, reading, research rotations, etc. in preparation for the qualifying examination.

Language Requirements. There is no foreign language requirement for the Ph.D. degree.

Research Rotation. Students may rotate to any laboratory in the Institute on acceptance by the professor involved. A student should stay long enough on each rotation to complete a piece of research and to learn the techniques involved. Research rotations will ordinarily be completed during the first year.

When the student completes his or her rotations, he or she petitions the Institute, with the consent of the professor concerned, to have a permanent adviser appointed. When the permanent adviser has been approved, this adviser will sign program cards for the student, advise him or her on courses, convene the proposition and examining committees, supervise the thesis and ultimately convene the thesis examining committee which is the final examination for the Ph.D. degree.

Qualifying Examination. Ordinarily this examination should be completed before the active dissertation work is initiated. The student's adviser will appoint, with the consent of the Institute, two other faculty members to serve with him or her in the five core areas mentioned above with no more than one proposition in any one area. Each proposition should be a proposal or hypothesis subject to debate. The proper form in which the propositions are to be submitted will be designed by the Institute. The student will be examined orally on at least three of the acceptable propositions by the three members of the propositions committee plus additional faculty members as needed.

Admission to Candidacy. To be admitted to candidacy, the student must have (a) passed the qualifying examination, (b) shown a capacity for independent research, (c) been accepted by a graduate adviser.

Dissertation and Defense. Each student will conduct an original investigation. After admission to candidacy, a dissertation committee will be appointed by the Director of the Institute. It will consist of at least three staff members headed by the student's permanent adviser. This committee will guide his or her research activities toward the doctoral dissertation, and will read and evaluate the completed dissertation. The candidate will be expected to present the principal results of his or her work and its significance during an examination in defense of the dissertation.

Courses of Instruction

PHOTOBIOLOGY 100a. and b. Photobiology of Cells and Organelles

Basic photobiology including an introduction to the physical and chemical concepts involved, the influence of the changing solar spectrum on the course of evolution, the catalytic uses of light by living systems including photoperception (phototropism, phototaxis and the evolution of visual systems), photomorphogenesis (blue light and re-far red systems), photoinduced rhythms, and other biological responses to light, energy storage including the photosynthetic apparatus, membranes and reaction centers, photosynthetic electron transport and phosphorylation, photosynthetic carbon metabolism and photoreduction, utilization of assimilatory power in reductive reactions, the deleterious effects of light including photodynamic action, photoprotection, erythema effects, ultraviolet damage to the genetic material and its photorepair and the evolution of repair systems and medical applications.

Prerequisites: Cell biology or its equivalent. Permission of the instructor.

Messrs. Gibbs, Schiff and Staff

PHOTOBIOLOGY 245a. Selected Topics in Plant Metabolism

A discussion of those areas of physiology and biochemistry to which plants lend themselves as experimental objects. Conspicuous examples are photosynthesis, photomorphogenesis, nitrogen fixation, and the biosynthesis of natural products such as anthocyanins, flavonoids, isoprenoids, phenols, terpenes, etc.

Prerequisite: Permission of the instructor.

Mr. Gibbs

PHOTOBIOLOGY 245b. Comparative Physiology and Biochemistry of Plants

A continuation of Photobiology 245a.

Prerequisite: Permission of the instructor.

Mr. Schiff

PHOTOBIOLOGY 406. Photobiology and Plant Physiology

Mr. Schiff

PHOTOBIOLOGY 412. Photochemistry and Plant Metabolism

Mr. Gibbs

Institute Journal Clubs

There will be a number of informal Journal Clubs which deal with various topics of concern to the various specialties. These will meet regularly under the auspices of the staff. Students, depending upon their individual needs, may be required to attend.

BIOPHYSICS

Objectives

The interdepartmental graduate program in biophysics, leading to the degree of Doctor of Philosophy, is designed to provide a broad background in the physics and chemistry of living processes and to develop the students' capacity for independent research. The program offers opportunity for study and research in biophysical chemistry, cellular physiology, molecular

genetics, photobiology, psychophysics and structural biology. Applicants are expected to have strong backgrounds in physical science with undergraduate concentrations in biology, chemistry, mathematics, physics or engineering.

Admission

The general requirements for admission to the Graduate School are given in an earlier section of this catalog. Applications should include, in addition to letters of reference, a personal statement giving reasons for choosing biophysics and indicating areas of interest. Applicants are required to take the Graduate Record Examination and are encouraged to visit Brandeis for interviews, if possible.

Faculty Advisory Committee

Professor David J. DeRosier (Biology), *Chair*; Professors Donald Caspar (Physics), Carolyn Cohen (Biology) and Serge Timasheff (Biochemistry); Associate Professors John Lisman (Biology) and Christopher Miller (Biochemistry).

The faculty of the Biophysics Program is composed of members of the Biochemistry, Biology, Chemistry and Physics departments. About twenty faculty members participate in this graduate program.

Degree Requirements

Doctor of Philosophy

Program of Study. Since Biophysics is a very broad field and students may have widely different backgrounds and goals, the course of study is flexible. During the first year students take Biophysics 300, a course in which students meet with selected faculty members to explore areas of research. Students are also required to successfully complete Biophysics 200b. In addition, students generally complete the following courses: Advanced Biochemistry (Biochemistry 101a), Introduction to Physical Biochemistry (Biophysics 104b), Structural Biology (Biophysics 102b) and Biophysical Optics (Biophysics 101a). Courses to complete the student's program will depend on the student's background and interests. The additional courses can be in the areas of biochemistry, biology, biophysics, chemistry, mathematics, photobiology or physics.

Language Requirements. Reading knowledge of one foreign language, chosen from French, German or Russian. A knowledge of computer programming may be substituted.

Admission to Candidacy. Students are admitted to candidacy on the basis of academic performance and on research proposals that they develop and defend, generally during the second year of study. Students must pass Biophysics 200b in order to qualify for admission to candidacy.

Dissertation and Defense. Each doctoral candidate will submit a dissertation describing his or her research and will be required to defend it in a Final Oral Examination.

Courses of Instruction

BIOPHYSICS 100a and b. Photobiology of Cells and Organelles

See Photobiology 100a and b.

Messrs. Gibbs, Schiff and Staff

BIOPHYSICS 101b. Biophysical Optics

Mr. DeRosier

BIOPHYSICS 102b. Cell Biology from a Structural Perspective

See Biology 102b.

Ms. Cohen

BIOPHYSICS 104b. Introduction to Physical Biochemistry

See Biochemistry 104b.

Mr. Miller and Staff

BIOPHYSICS 142a. Neurobiology

See Biology 142a.

Ms. Marder

BIOPHYSICS 152bR. Biological Assembly

See Physics 152b.

Mr. Caspar

BIOPHYSICS 200b. Seminar in Biophysical Research

A required seminar for Biophysics majors which will deal with current biophysical research. Emphasis is on the understanding, critical evaluation and use of scientific literature. Students will discuss topics from the areas of biophysical chemistry, cellular physiology, molecular genetics, photobiology, and structural biology, based on the reading of significant articles. In consultation with the faculty, each student will develop a research proposition based on independent reading and will prepare a research plan in the form of a thesis proposal.

Open to graduate students in other sciences with permission of the instructor.

Mr. Caspar

BIOPHYSICS 229b. Special Topics in Inorganic Chemistry: Introduction to X-ray Structure Determination*BIOPHYSICS 231bR. Molecular Aspects of Membrane Phenomena**

See Biochemistry 231a.

Mr. Miller

BIOPHYSICS 300. Introduction to Research in Biophysics

Students carry out a project in the research laboratory of one of the faculty members. Projects and faculty are selected from the departments of biochemistry, biology, chemistry and physics and the Institute of Photobiology. At least three terms of Biophysics 300 are required.

Staff

CHEMISTRY

Objectives

The graduate program in chemistry, comprising course work, seminar participation, and research, is designed to lead to a broad understanding of the subject. The graduate program leads to the M.A. and Ph.D. degrees in chemistry. The Ph.D. is offered with specializations in inorganic, organic, physical and physical-organic chemistry and in chemical-physics. (Detailed information on the interdisciplinary specialization in chemical physics is found on page 59.) All students will be required to demonstrate knowledge in advanced areas of inorganic, organic and physical chemistry. The doctoral program is designed to be flexible so that individual programs of study may be devised to satisfy the particular interests and needs of each student. In each case this program will be decided by joint consultation between the student and the Departmental Committee of Graduate Studies and the thesis supervisor, when selected. The doctoral program will normally include a basic set of courses in the student's own area of interest, to be supplemented by advanced courses in chemistry and, where appropriate, in biochemistry, biology, mathematics and physics.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. In addition, the undergraduate curriculum of applicants should include courses in physics and mathematics (differential and integral calculus), and courses in general and inorganic, analytical, organic and physical chemistry.

Admission to advanced courses will be based upon results of a qualifying examination in each

of these areas of chemistry, which will be taken upon entrance. These examinations will determine if the student shall be required to make up deficiencies in preparation. The results of the qualifying examinations will be considered in the assignment of awards for the subsequent years of graduate study and in determining a student's eligibility to continue in a degree program.

Faculty

Professor Colin Steel, *Chair*: Chemistry of excited molecules and radicals; the kinetics and mechanisms of photochemical and thermal reactions; photophysics and photochemistry of infrared laser-induced reactions.

University Professor Saul G. Cohen: Chemistry of free radicals; organic photochemistry; specificity and mechanism of reactions of enzymes.

Professor Irving R. Epstein: Experimental and theoretical studies of oscillating chemical reactions and dynamic instabilities; mathematical modeling of biochemical techniques.

Professor Ernest Grunwald: Infrared laser chemistry; molecular absorption from IR laser sources; molecular electronic spectra and conformational studies at high temperatures; solvation in polar liquid solutions.

Professor James C. Hendrickson: Synthesis of natural products; computerization of synthesis design and development of new synthetic reactions.

Professor Peter C. Jordan: Statistical mechanics of cooperative phenomena and of membrane transport; electrostatic modeling of ion pores.

Professor Kenneth Kustin: Inorganic biochemistry; vanadium and iron in tunicate blood cells and human tissues; membrane transport; fast reactions; oscillating reactions

Professor Henry Linschitz: Reactions of excited molecules; stabilization of free radicals; photo-ionization in solution; metal complexes; physical mechanisms of photobiological processes.

Professor Myron Rosenblum: Chemistry of organometallic complexes of the transition elements; new methods in organic synthesis employing organometallic complexes.

Professor Robert Stevenson: Isolation and structure of natural products; compounds of medicinal interest (steroids, terpenoids, lignans, heterocyclics).

Associate Professor Iu-Yam Chan: Optically detected magnetic resonance; time resolved magnetic resonance; laser spectroscopy.

Associate Professor Bruce M. Foxman: X-ray structure determination; coordination polymers; chemical, physical and crystallographic studies of solid-state reactions.

Associate Professor Michael J. Henchman: The chemistry of ions and solvated ions in the gas phase; its relationship to solution chemistry, and its application to atmospheric and interstellar chemistry.

Associate Professor Philip M. Keehn: Synthetic methods, organic synthesis of strained rings and theoretically interesting molecules; applications of nmr spectroscopy to organic systems; photooxidation; pure and applied laser chemistry of organic systems.

Associate Professor Barry B. Snider: Synthetic methods; mechanism of synthetically important reactions; total synthesis of natural products.

Associate Professor Thomas R. Tuttle, Jr.: Chemistry of liquid solutions; the composition and structures of species in metal solutions in polar solvents; application of spectroscopy, e.g., magnetic resonance, optical and spectropolarimetry, to elucidation of the composition and structure of solutions; theory of chemical species in solution.

Assistant Professor Alan M. Stolzenberg: Bioinorganic chemistry; synthesis, structure, and reactivity of inorganic and organometallic complexes; homogeneous catalysis; electrochemistry and electron transfer.

Assistant Professor Louis S. Stuhl: Organometallic synthesis, catalysis and mechanism; novel ligands and oxidation states in organometallic complexes, and applications to organic synthesis.

Lecturer with rank of Associate Professor Arthur H. Reis, Jr.: Solid state chemistry; one- and two-dimensional materials; small molecule reactions in zeolites.

Degree Requirements

Detailed information on the interdisciplinary specialization in chemical physics is found on page 59

Entering students may be admitted to either the master's or the doctoral program.

All candidates for advanced degrees are required to meet the following requirements:

Qualifying Examination. These examinations are set twice a year, in September and January, and are based on the undergraduate chemistry curriculum. Students are required to take and are expected to pass qualifying examinations in organic, inorganic-analytical and physical chemistry during their first year.

Language Requirements. Each student is obliged to demonstrate a useful reading knowledge of scientific French, German or Russian within the first two years of residence.

Seminar. Each student in residence is required to attend and participate in the seminar in his or her chosen area of concentration throughout the period of graduate study.

Teaching. It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Placement and Evaluation of Progress. Recommendations with respect to the first-year course of study will be based on the performance on the initial qualifying examinations. Admission to the graduate degree programs will be based on the student's record in course work during the first year and the performance on the qualifying examinations.

Master of Arts

Program of Study. Each candidate is required to complete successfully one year of study at the graduate level in chemistry, or, with prior permission of the Departmental Graduate Studies Committee, in related fields. The program will include laboratory work and, normally, six semester courses at the graduate level. The detailed program of study will be one jointly arrived at by the candidate and the Graduate Studies Committee to reflect the candidate's area of interest as well as a perspective of other areas.

Residence Requirement. The minimum residence requirement for the M.A. degree is one year.

Doctor of Philosophy

Program of Study. A balanced program of study will be prepared jointly by the student and the Departmental Graduate Studies Committee. This will normally include a basic core of course work in the student's area of interest and later more specialized courses appropriate to it. It is expected that doctoral students will choose a research adviser during the first year, normally in the second semester. A student who satisfactorily completes the first year of study in the doctoral program qualifies for the master's degree.

Admission to Candidacy. A student is recommended for admission to candidacy for the doctoral degree upon certification by his or her thesis adviser and the Graduate Studies Committee that the student has satisfied the qualifying and language examination requirements and has made satisfactory progress in the program of study, research and the final Ph.D. examinations.

Final Examinations. The graduate student must demonstrate proficiency by taking final examinations in his or her major field: organic, physical-organic, physical, or inorganic chemistry. In the organic chemistry program, a cumulative examination procedure is used. Each year, six one-hour examinations (on unannounced topics), and one three-hour examination (on an announced reading) are given. The final examination requirement is satisfied by the student having passed a) one three-hour examination and six one-hour examinations, or b) two three-hour examinations and three one-hour examinations. In physical-organic chemistry, final examinations are administered twice a year and are based on assigned readings. Students must pass three of these examinations and must maintain satisfactory progress toward this end. In physical chemistry and inorganic chemistry, generally during the third semester of graduate work, the student is assigned a set of propositions. In physical chemistry the set consists of three propositions; the student takes a written examination on one proposition and is examined orally on the remaining two. In inorganic chemistry the student is assigned two propositions; he or she takes a written examination on one proposition, and is assigned two propositions; he or she takes a written examination on one proposition, and is examined orally on his or her proposed research project and the remaining proposition.

Residence Requirements. The minimum residence requirement for the Ph.D. degree is two years.

Dissertation and Defense. A dissertation is required which describes the results of an original investigation and which demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. An oral defense of the dissertation will be held.

Courses of Instruction

CHEMISTRY 113bR. Advanced Laboratory Techniques: Modern Organic Methods

An advanced laboratory course designed to give experience in modern methods of organic transformations in a research environment. Experiment-projects will emphasize the use of various techniques (e.g., vacuum, gas, inert atmosphere) on a variety of important reactions.

Prerequisite: Satisfactory grade in an undergraduate laboratory course in organic chemistry.

Enrollment limited to 12.

Mr. Keehn

CHEMISTRY 121a. Inorganic Chemistry I, Lectures

Introduction to the principles of chemical binding; valence theory, periodic properties, symmetry, ionic and molecular structures. Application chiefly to the chemistry of the transition elements.

Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry. Three lecture hours a week.

Messrs. Foxman and Stolzenberg

***CHEMISTRY 129b. Inorganic Chemistry Laboratory**

CHEMISTRY 130a. Advanced Organic Chemistry: Structure

Introduction to group theory and its application to molecular orbital theory and spectroscopy.

Prerequisite: Satisfactory grade in an undergraduate course in organic chemistry.

***CHEMISTRY 131a. Advanced Organic Chemistry: Topics in Structure and Reactivity**

CHEMISTRY 132b. Advanced Organic Chemistry: Spectroscopy

Application of physical and spectroscopic methods to the elucidation of structure and stereochemistry of organic compounds.

Prerequisite: Satisfactory grade in Chemistry 130a or permission of instructor.

Mr. Stevenson

CHEMISTRY 133aR. Advanced Organic Chemistry: Mechanisms

Kinetics stereochemistry and mechanisms of selected organic reactions.

Prerequisites: Satisfactory grade in undergraduate courses in organic and physical chemistry.
Mr. Stuhl

CHEMISTRY 134b. Advanced Organic Chemistry: Synthesis

Systematic design of organic syntheses, including a survey of reaction for construction and functionalization of organic molecules and criteria for their use in synthesis design.

Selected total syntheses from the literature will be examined.
Mr. Hendrickson

CHEMISTRY 141a. Advanced Physical Chemistry I

Thermodynamics and statistical thermodynamics. Properties of real systems: gases phase stability, chemical equilibrium, and solution. Statistical equilibrium, ensembles, and fluctuations.

Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry.

Mr. Linschitz

CHEMISTRY 141b. Advanced Physical Chemistry I

Irreversible thermodynamics and chemical kinetics. Entropy production, reciprocal relations, microscopic reversibility and regression of fluctuations. Active transport, relaxation kinetics and oscillating reactions. Solution kinetics including enzyme reactions. Gas kinetics and theories of elementary processes. Microscopic kinetics: energy transfer and collision dynamics.

Prerequisite: Satisfactory grade in Chemistry 141a or permission of instructor.

Mr. Jordan

CHEMISTRY 142bR. Advanced Physical Chemistry II

Quantum mechanics: waves and wave packets, operator methods, Schrodinger's equation, simple model systems, angular momenta, perturbation theory and variational principle.

Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry.

Mr. Jordan

***CHEMISTRY 143aR. Advanced Physical Chemistry II**

CHEMISTRY 144aR. Structure and Spectroscopy

Interaction of radiation with matter and its relevance to molecular structure. Topics will be selected from: x-ray and electron diffraction; microwave, nmr, infrared, visible and ultraviolet absorption; molecular beam and mass spectrometry.

Prerequisite: Satisfactory grade in an undergraduate physical chemistry course.

Mr. Chan

***CHEMISTRY 145b. Special Topics**

CHEMISTRY 150c. Special Topics in Chemistry

A series of six topics (three each term) given in general by six faculty members. Each topic will be covered in approximately thirteen lecture hours (including one examination hour). To complete the course, a student will be required to take three of the six offerings. The final grade will be assigned as the average of the three individual grades.

Topics for 1982-83 are:

Fall:

1. Introduction to Chemistry of Steroids
2. Photophysics of Carbonyls
3. X-ray Structure Determination

Mr. Stevenson

Mr. Chan

Mr. Foxman

Spring:

4. Control of Stereochemistry in Acyclic Systems
5. Oscillating Reactions and Dynamic Instabilities
6. Neutron Diffraction

Mr. Snider

Mr. Epstein

Mr. Reis

BIOCHEMISTRY 100a. Introductory Biochemistry

See Biochemistry 100a.

Section 1: Mr. Hollocher

Section 2: Messrs. Abeles and Jencks

BIOCHEMISTRY 100aR. Introductory Biochemistry

See Biochemistry 100a.

Mr. Murakami and Ms. Ernest

CHEMISTRY 200. Advanced Chemistry Laboratory

Staff

CHEMISTRY 220c. Inorganic Chemistry Seminar

Required of graduate students in inorganic chemistry, who must audit this course each year.

Staff

***CHEMISTRY 221b. Advanced Inorganic Chemistry I**

***CHEMISTRY 222b. Advanced Inorganic Chemistry II**

***CHEMISTRY 229b. Special Topics in Inorganic Chemistry**

CHEMISTRY 231c. Organic Chemistry Seminar

Required of graduate students in inorganic chemistry, who must audit this course each year.

Staff

CHEMISTRY 232bR. Chemistry of Heterocyclic Compounds

A systematic survey of the principal oxygen, nitrogen and sulfur heterocycles of five and six membered and fused ring systems, including their synthesis, chemical reactions and aromatic character.

Mr. Hendrickson

***CHEMISTRY 233b. The Biosynthesis of Natural Products**

***CHEMISTRY 234b. Chemistry of Organometallic Compounds**

***CHEMISTRY 235a. Special Topics in Organic Chemistry: Synthetic Organic Chemistry**

***CHEMISTRY 235b. Special Topics in Organic Chemistry**

***CHEMISTRY 237b. The Chemistry of Organic Natural Products**

CHEMISTRY 240c. Physical-Organic Chemistry Seminar

Required of graduate students in physical-organic chemistry, who must audit this course each year.

Staff

CHEMISTRY 241c. Physical Chemistry Seminar

Required of graduate students in physical chemistry, who must audit this course each year.

Staff

***CHEMISTRY 244a. Special Topics in Physical Chemistry**

***CHEMISTRY 244b. Special Topics in Physical Chemistry**

***CHEMISTRY 245a. Physical Organic Chemistry**

CHEMISTRY 250c. Chemical Physics Seminar

Required of graduate students in chemical physics, who must audit this course each year.

Staff

The following courses are given every three to five years or when there is sufficient student interest:

***CHEMISTRY 122b. Inorganic Chemistry II, Lectures**

- *CHEMISTRY 123b. Nuclear Chemistry
- *CHEMISTRY 243a. Statistical Thermodynamics
- *CHEMISTRY 248a. Advanced Quantum Chemistry

CHEMISTRY COLLOQUIUM

Lectures by faculty and invited speakers. Required of all graduate students. *Non-credit.*

Courses in Research

- CHEMISTRY 400. Organic Chemistry and Physical Organic Chemistry**
Reaction mechanisms; photochemistry; enzyme reactions; free radicals.
Mr. Cohen
- CHEMISTRY 401. Organic Chemistry**
Chemistry of natural products; steroids, triterpenoids, bisarylpropanoids, benzofurans.
Mr. Stevenson
- CHEMISTRY 403. Organic Chemistry**
Chemistry of organometallic complexes of the transition elements. New methods in organic synthesis employing organometallic complexes.
Mr. Rosenblum
- CHEMISTRY 404. Organic Chemistry**
Synthesis of natural products; development of new synthetic reactions; computerization of synthesis design systematics.
Mr. Hendrickson
- CHEMISTRY 406. Physical Chemistry**
Reactions of excited molecules; luminescence; electron solvation; metal complexes; physical mechanisms of photobiological processes.
Mr. Linschitz
- CHEMISTRY 408. Physical Chemistry**
Experimental and theoretical study of chemical species in solution. Spectroscopic investigations of metal solutions in polar solvents.
Mr. Tuttle.
- CHEMISTRY 409. Inorganic Chemistry**
Inorganic biochemistry; vanadium and iron in tunicate blood cells and human tissues; membrane transport; fast reactions; oscillating reactions.
Mr. Kustin
- CHEMISTRY 411. Physical Chemistry**
Chemistry of excited molecules and radicals; the kinetics and mechanisms of photochemical and thermal reactions. Photophysics and photochemistry of infrared laser-induced reactions.
Mr. Steel
- CHEMISTRY 412. Physical and Physical Organic Chemistry**
Infrared laser chemistry; molecular absorption from IR laser sources; molecular electronic spectra and conformational studies at high temperatures; solvation in polar liquid solution.
Mr. Grunwald
- CHEMISTRY 413. Physical Chemistry**
Membrane transport; electrostatic modelling of ion pores, properties of ferrofluids.
Mr. Jordan
- CHEMISTRY 414. Physical Chemistry**
Kinetic studies of the reactions and properties of ions in the gas phase.
Mr. Henchman
- CHEMISTRY 415. Physical Chemistry**
Experimental and theoretical studies of oscillating chemical reactions and dynamic instabilities; mathematical modeling of biochemical kinetics.
Mr. Epstein

CHEMISTRY 416. Physical Chemistry

Application of optically detected magnetic resonance, time resolved magnetic resonance, EPR and ENDOR to the investigation of organic triplet state molecules. Laser spectroscopy in supersonic jets and in crystals.

Mr. Chan

CHEMISTRY 417. Organic Chemistry

Organic synthesis of strained ring and theoretically interesting molecules; synthetic methods; application of nuclear magnetic resonance spectroscopy to organic systems; photooxidation; thermal chemistry; pure and applied laser chemistry of organic systems.

Mr. Keehn

CHEMISTRY 419. Inorganic Chemistry

X-ray structure determination; reactions in crystals; coordination polymers; kinetics, mechanisms, and crystallography of rearrangement, polymerization, and decomposition reactions in the solid-state.

Mr. Foxman

CHEMISTRY 420. Organometallic Chemistry

Organometallic synthesis and reactivity: chemistry of transition metal cyano complexes; organometallic complexes in unusual oxidation states; catalysis of carbon-carbon bond formation and cleavage. Chemistry of non-metals.

Mr. Stuhl

CHEMISTRY 421. Organic Chemistry

Synthetic methodology and natural product synthesis: Lewis acid induced carbon-carbon bond forming reactions of alkenes and their application to natural product synthesis; intramolecular reactions; ene and Prins reactions; application of organometallic chemistry to synthesis.

Mr. Snider

CHEMISTRY 422. Inorganic Chemistry

Synthesis, structure and reactivity of inorganic and organometallic complexes. Bioinorganic chemistry.

Mr. Stolzenberg

Ph.D. in Chemistry with Specialization in Chemical Physics

The graduate program in chemical physics is an interdisciplinary specialization designed to meet the needs of students who wish to prepare themselves for the study of scientific problems using the methods and theories of modern physics and physical chemistry. This objective is attained by (1) formal course work in chemistry, physics, and, possibly, mathematics; (2) participation in relevant graduate seminars; (3) a program of supervised research involving chemical physics; (4) independent study.

The program is designed to be flexible in providing individual programs of study to satisfy the particular interests and needs of each student. Final programs of study and research will be jointly arrived at by the student, his or her research supervisor and the Chemical Physics Committee. Only candidates for the Ph.D. will be accepted.

Admission

The general requirements for admission to the Graduate School apply to candidates for admission to the graduate program in chemical physics. Applicants should have a strong undergraduate background in chemistry, physics and mathematics.

Degree Requirements

No master's degree is offered with specialization in chemical physics, but students who satisfy the appropriate requirements will be eligible for the M.A. degree in chemistry.

All candidates for the Ph.D. degree in Chemistry with specialization in chemical physics must meet the following requirements:

Qualifying Examinations. Each student is expected to demonstrate a satisfactory knowledge of undergraduate chemistry, physics and mathematics by the performance in three qualifying examinations: one each in physical chemistry, organic or inorganic/analytical chemistry and physics/mathematics. These examinations are set two times a year, in September and January. Results of these examinations will be used as an aid in constructing the student's initial program of course work and will be considered by the Chemical Physics Committee in evaluating the student's progress.

Language Requirements. Each student is required to demonstrate a useful reading knowledge of scientific French, German or Russian within the first two years of residence.

Seminar. Each student in residence is required to attend and to participate in the Chemical Physics Seminar. Participation in other seminars in physics and chemistry is also recommended.

Teaching. It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Doctor of Philosophy

Program of Study. It is expected that some candidates for the Ph.D. degree in chemistry with specialization in chemical physics may require a longer period of time in course work than will students in either of the fields of physics or chemistry. In general, the program for the Ph.D. in chemistry with specialization in chemical physics will include eight semester graduate courses: four in physical chemistry, one in either organic or inorganic chemistry and three in physics. No specific course work in mathematics is required, but students are expected to be familiar with the techniques necessary for the proper pursuit of their research. In addition, each student is expected to demonstrate a knowledge of elementary computer programming.

Students may satisfy their program's course requirements in part or in entirety by passing (or giving evidence of ability to pass) the final examination in the appropriate number of such courses. Courses in areas related to chemistry and physics may also be considered by the Chemical Physics Committee in partial fulfillment of the requirements.

Admission to Candidacy. Students are recommended for admission to candidacy for the doctoral degree upon certification by their thesis adviser and the Chemical Physics Committee that they have satisfied the qualifying and language examination requirements and have made satisfactory progress in the program of study, research and the final Ph.D. examination.

Final Examinations. Final examinations in chemical physics are generally taken during the third semester of graduate work. The student is assigned a set of three propositions; the student takes a written examination on one proposition and is examined orally on the remaining two.

Residence Requirements. The minimum residence requirement for the Ph.D. degree is two years.

Dissertation and Defense. A dissertation is required which describes the results of an original investigation and which demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. An oral defense of the dissertation will be held.

CLASSICAL AND ORIENTAL STUDIES

ORIENTAL STUDIES PROGRAM

Objectives

The program of studies aims at preparing the student for teaching and research in the history, languages and archaeology of the ancient civilizations of the Nile valley, western Asia and the

Aegean.

The program has a twofold purpose: first, to train students who wish to specialize in these areas of study; second, to offer an opportunity to students in other fields to integrate with their own studies the courses given in the Department.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program.

Students planning to enter this Department should take as much Hebrew, Greek and Latin as possible during their undergraduate study. They should also make every effort to achieve a sight reading knowledge of French and German before embarking on graduate study.

Faculty

Associate Professor Ian A. Todd, *Chair*: Aegean and Near Eastern archaeology.

Professor Douglas J. Stewart: Greek language and philosophy.

Professor Louis V. Zabkar, *Director of Graduate Studies*: Egyptian language, history and archaeology.

Associate Professor Patricia A. Johnston: Latin language and literature.

Associate Professor Leonard C. Muellner: Greek language and literature.

Assistant Professor Judith Hallett: Latin language and literature.

Assistant Professor Martha A. Morrison: Cuneiform studies. Mesopotamian history, language.

Assistant Professor Cheryl L. Walker: Classical history.

Instructor Deborah B. Shaw: Latin language and literature.

Degree Requirements

Master of Arts

Program of Study. Each candidate for the master's degree is required to complete satisfactorily not less than eight semester-courses in the department, plus any additional course work that the major professor may prescribe. While an exceptionally well-prepared student may fulfill the requirements for the degree in one year, two years of study will normally be required. Master's examinations will not be administered before the end of the second year of residence except by special permission of the department. All students, whatever their principal area of specialization, will be required to study in all three major areas covered by the department, namely, language, history, and archaeology.

Language Requirement. The candidate must demonstrate a reading proficiency in French or German, and competence in at least one ancient language. Certain areas of specialization will require the knowledge of additional languages.

Qualifying Examinations. The student must demonstrate, in written and oral examinations, proficiency in two major areas of the program.

Doctor of Philosophy

Program of Study. The requirements are the same as for the Master of Arts degree, plus eight additional semester-courses in the department.

Language Requirement. The candidate must demonstrate a reading knowledge of two modern foreign languages, ordinarily French and German, and competence in at least one ancient language. Certain areas of specialization will require the knowledge of additional languages.

Qualifying Examinations. The student must demonstrate, in written and oral examinations, proficiency in two major areas of the program. A thorough competence must be demonstrated in the field of concentration as well as proficiency in another area of the program elected by the student.

Admission to Candidacy. A student shall be eligible for admission to candidacy upon completing the language requirements and satisfactorily passing the written and oral qualifying examinations.

Dissertation and Defense. The dissertation must be a significant and original contribution to scholarship demonstrating a capacity for independent research based on primary sources. The completed dissertation shall be read and found acceptable by its director and two other readers, one of whom must be a member of another department or from another academic institution. The candidate must defend the dissertation successfully in a Final Oral Examination.

Courses of Instruction

CLASSICS

***GREEK 116a. Aristophanes**

***GREEK 116b. Pindar**

GREEK 118a. Euripides

Reading of Medea and selected scenes from other plays.

Mr. Stewart

***GREEK 118b. Sophocles**

GREEK 120aR. Plato: A Literary Study

A close study of one major dialogue as a literary creation. For 1982-83: *Symposium*

Mr. Stewart

***GREEK 120b. The Histories of Herodotus**

***LATIN 116a. Latin Prose Authors**

Staff

***LATIN 116b. Satura**

***LATIN 118a. Virgil: Aeneid VII-XII**

***LATIN 118b. Roman Historians**

LATIN 120aR. Roman Epic Poets: Ovid's *Metamorphoses*

A close investigation of Ovid's poetic art, including the major themes of the poem, where it stands in the epic tradition, and the world-view it expresses.

Ms. Shaw

ARCHAEOLOGY

CLORS 100a and b. The Archaeology of the Aegean and the Near East

An introduction to the Neolithic and Bronze Age cultures of Mesopotamia, Egypt, Syria-Palestine, Anatolia, Cyprus and the Aegean. Included will be the origins of agriculture and the rise of civilization in the Near East. Interconnections between the various cultural spheres will also be discussed.

Mr. Todd

***CLORS 107a. Temple, Myth and Ritual in Ancient Egypt**

***CLORS 107b. Temple, Myth and Ritual in Ancient Mesopotamia**

CLORS 111. The Archaeology of Syria-Palestine

A survey of the archaeology of Syria-Palestine from the tenth millennium B.C. through the Iron Age.

Mr. Todd

***CLORS 116. The Archaeology of Cyprus**

***CLORS 117. The Archaeology of Mesopotamia and Iran**

***CLORS 119. The Archaeology of the Aegean**

CLORS 120b. Archaeological Methods

See Anthropology 109b.

Mr. Zeitlin

CLORS 121aR. Directions and Issues in Archaeology

See Anthropology 123aR.

Mr. Zeitlin

***CLORS 122. The Archaeology of Anatolia**

***CLORS 131a. Mathematics and Computers in Archaeological Data Analysis I**

***CLORS 131b. Mathematics and Computers in Archaeological Data Analysis II**

***CLORS 146a. Environment and Archaeology**

HISTORY

***CLORS 101a. Survey of Greek History from the Bronze Age to 404 B.C.**

***CLORS 101b. Survey of Greek History from 404 B.C. to 146 B.C.**

CLORS 102a. Roman History to 27 B.C.: A Survey

The political and social history of Republican Rome, from primary and secondary sources (in English). Readings will be from Livy, Polybius, Plutarch, Sallust, Cicero, Caesar and the Roman poets and playwrights.

Ms. Walker

CLORS 102b. Topics in Roman History: From Republic to Empire

Will analyze the first centuries B.C. and A.D., the period of transition from oligarchy to Empire. All readings (in English) from such primary sources as Caesar, Plutarch, Suetonius, Sallust, Tacitus, Cicero, Pliny and Catullus.

Ms. Walker

***CLORS 103a. Islam: Civilization and Institutions**

CLORS 104a. Hesiod: *Works and Days

***CLORS 105b. Golden Age of Greece**

CLORS 106b. Greek Mythology

Initiation into the fantastic world of Greek mythology. Studying a wide range of myths, many unfamiliar and not in literary sources, this course will introduce procedural and conceptual tools to reveal their symbolic meaning. The myths will be situated in the proper cultural, aesthetic and historical contexts. The course ends with the contribution of Greeks to the end of mythological thought and the birth of scientific thought.

Messrs. Jacopin and Muellner

CLORS 109b. Imperial Roman History: A Survey

The political and social history of Rome under the Emperors, 27 B.C. - 395 A.D. Readings from Ovid, Seneca, Tacitus, Suetonius, Pliny the Younger, Petronius, Lucian, Augustine. Graves' *I Claudius* and other primary and secondary readings. All readings in English.

Ms. Walker

***CLORS 110b. Topics in Greek History**

CLORS 125b. Women in Classical Antiquity

A study of women's image and reality in ancient Greek and Roman societies through an examination of literary, linguistic, historical, legal and artistic evidence; special emphasis on women's role in the family, views of female sexuality, and the place of women in creative art. Readings to include primary sources (in translation) and modern critical writings.

Ms. Hallett

***CLORS 129a. Philo Judaeus of Alexandria**

***CLORS 129b. Alexandria: The City and the Idea**

- CLORS 145bR. From Alexander the Great to Cleopatra VII: Egypt under the Ptolomies**
 During the last three centuries of the B.C. era, Egypt went from political ascendancy to internal conflicts and external weakness; after some attempts at reorganization, it collapsed before the power of Rome. Her culture, however, centred around the temples, survived well into the Roman imperial period. Lectures will describe in detail this highly instructive historical process and the outstanding personalities of that time. *Mr. Zabkar*
- CLORS 148aR. Rise, Function and Fall of Early Civilization: Concepts and Explanations**
 See Anthropology 148aR. *Mr. Cowgill*
- *CLORS 149a. The World Before Civilization**
- *CLORS 150b. History of Egyptian Civilization**
- CLORS 160a. Ancient Egyptian Religion**
 A survey of religious beliefs and practices from Early Dynastic times to the end of the period of the great temples. Discussions will be illustrated by temple reliefs, tomb paintings, papyrus vignettes, etc., and will be accompanied by the reading of religious texts in English translation. *Mr. Zabkar*
- CLORS 165a. Introduction to the History and Civilization of the Near East in the Pre-Islamic Period**
 Survey of the history and civilization of the Near East with a focus on Mesopotamia from Sumer through the Persian period. *Ms. Morrison*
- *CLORS 165b. History of Mesopotamia in the 2nd and 1st Millennia B.C.**
- *CLORS 166a. Topics in Mesopotamian History: Second Millennium B.C.E.**
- *CLORS 167b. Topics in Mesopotamian History: First Millennium B.C.E.**
- *CLORS 168a. The Hellenistic Period in Mesopotamia**
- *CLORS 170a. Historiography in the Ancient World**
- CLORS 188. Materials in Ancient Societies: Ceramics**
 See Anthropology 188. *Ms. Zeitlin*

LANGUAGES

- CLORS 108. Comparative Grammar of Semitic Languages**
 See NEJS 108b. *Mr. Young*
- AKKADIAN 101. Elementary Akkadian**
 Intensive study of Akkadian grammar. Readings in the Code of Hammurabi and other Old Babylonian materials. *Ms. Morrison*
- *AKKADIAN 102. Advanced Akkadian I**
- AKKADIAN 103a. Advanced Akkadian III: Second Millennium Texts**
- AKKADIAN 201a. Akkadian Religious Texts**
 See NEJS 207a. *Mr. Abusch*
- ARABIC 101. Introductory Literary Arabic**
 See NEJS 101. *To be announced*
- ARABIC 102b. Intermediate Arabic**
 See NEJS 102b. *Mr. Levy*
- *COPTIC 101. Coptic Language**
- EGYPTIAN 101a. Elementary Egyptian**
 A study of Middle Egyptian based on Gardiner's grammar. The principal texts to be read are those included in Blackman's *Middle Egyptian Stories* and de Buck's *Readingbook*. In the second term some Middle Egyptian hieratic is read. *Mr. Zabkar and Staff*

***EGYPTIAN 102. Advanced Egyptian I: Selected Texts of the Ptolemaic Period**

***EGYPTIAN 104b. Advanced Egyptian II: Late Egyptian Stories**

***HITTITE 101. Elementary Hittite**

SUMERIAN 201b. Sumerian Historical Inscriptions

See NEJS 219b.

Mr. Abusch

***UGARITIC 101.**

CLORS 301-305. Directed Readings

301. <i>Mr. Zabkar</i>	304. <i>Mr. Stewart</i>	307. <i>Ms. Walker</i>
302. <i>Mr. Todd</i>	305. <i>Mr. Muellner</i>	308. <i>Ms. Shaw</i>
303. <i>Ms. Morrison</i>	306. <i>Ms. Johnston</i>	309. <i>Ms. Hallett</i>

CLORS 401-405. Dissertation Research

401. <i>Mr. Zabkar</i>	405. <i>Mr. Muellner</i>
402. <i>Mr. Todd</i>	406. <i>Ms. Johnston</i>
403. <i>Ms. Morrison</i>	407. <i>Ms. Walker</i>
404. <i>Mr. Stewart</i>	

COGNITIVE SCIENCE

See Psychology (page 123).

COMPARATIVE HISTORY

Objectives

The graduate program in comparative history, leading to the degree of Doctor of Philosophy in History, aims to train students in the comparative approach that comprises the best tradition in historical scholarship. Comparative history builds on the development of expertise in a specific field — in this program usually early modern European history — but it also involves the conceptualization and study of the past according to political, social, economic, cultural, intellectual and psychological categories that transcend parochial national or period divisions.

Through wide though carefully focused readings, students are encouraged to develop the ability to make cross-cultural comparisons across the five continents and the span of recorded time. Thus, for example, students of social mobility, institutional change, the class of ideologies, or the organization of the state will deepen their understanding of how different cultures approach, define and resolve the issues at hand. The formal program focuses above all on the comparative history of Western Europe, but students will find a structured opportunity to examine the patterns of American civilization as well, and to study for comparative purposes Russia and Eastern Europe, Latin America, Africa, and the Near and Far East.

The program is designed to help students to cope with the competitive academic environment of the next decade by training them rigorously in methods of historical research and writing, by equipping them to teach the whole range of European history from the Renaissance to the present, and by fostering the intellectual flexibility and interdisciplinary skills that command a premium outside the academic marketplace.

A small, select student body will work in close cooperation with the faculty. Most instruction will take place in seminars specifically designed for graduate students or in individual conferences with faculty advisers. From the beginning, the curriculum will help students prepare for their qualifying examinations and guide them toward eventual dissertation research. Upon entrance, students will declare an intention to take qualifying examinations focusing either in the early modern period (1450-1789) or the modern period (1715 to the present). Formal faculty offe-

rings are greater in the modern period, but a full range of instruction is also available for early modern history.

During the first year, students must prepare a major research paper on a topic chosen in consultation with a principal adviser. The paper may be comparative in research (involving two or more symmetrical case studies), or it may focus upon a single case (with that research informed by a reading of secondary literature on similar cases). The paper constitutes the major intellectual enterprise of the first year, and students allot half their time to it in the first semester. First-year students also enroll in two introductory graduate colloquia, one devoted to the early modern period. During both of their first two years of residence, students must also enroll in the comparative history seminar, which treats significant problems in comparative perspective and introduces students to the methods and issues in comparative history. Students must also enroll in the historiography colloquium (offered alternate years). Finally, before they may take the qualifying examination all students must complete a tutorial or other work focusing on a part of the world geographically or chronologically removed from their principal area of specialization with a view to gaining a comparative perspective on their major research interest.

The qualifying examination for the Ph.D. is normally taken at the end of the second year. Students may specialize either in the early modern period (1450-1789) or the modern period (1715 to the present). But they must demonstrate a general mastery of two subject fields in European history from the Renaissance to the present. Students in some cases may elect an examination on the medieval period in lieu of either the early modern or modern period. The student may petition, moreover, to substitute the medieval period for a portion of the early modern period. In addition, a student with program approval may substitute a methodological field, such as psychohistory, anthropological history or quantitative history, for half of one conventional historical area. The subject fields will normally be chosen from such categories as social, economic, intellectual, cultural, political and international history.

Students should normally plan to complete all work for the doctorate, including the dissertation, within four to five years after entering the program; prolongation of study past the sixth year is discouraged.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply to candidates for admission to this program. Students with a sound preparation in history and who have demonstrated unusual imagination and critical insight will receive special consideration. Undergraduate majors in the other social sciences or in allied fields such as comparative literature may, however, apply. Applicants should submit a sample of written work, preferably in European history. Only doctoral candidates will be accepted into the regular program. Unusually well-qualified students with distinguished records who wish to obtain a master's degree in modern history before going on to further training in such fields as law, business, diplomacy, social work, journalism or medicine, or who have already earned degrees in these fields, may also be admitted.

Faculty

Associate Professor Gregory Freeze, *Chair*: Russia. Social history.

University Professor Frank E. Manuel: Modern European intellectual history.

Professor Rudolph Binion: Modern history. Culture and thought. Psychohistory.

Professor Eugene C. Black: Modern history. Political and social institutions.

Professor John P. Demos: Early modern history. Social institutions.

Professor David H. Fischer: Modern history. Social institutions.

Professor Morton Keller: Legal and political institutions.

Professor Marvin Meyers: Ideas and politics.

Professor Stephen A. Schucker: Modern diplomatic, economic, political and business history.

Professor Milton I. Vanger: Modern Latin American history. Political institutions.

Associate Professor Bernard Wasserstein: Modern European, Jewish and Near Eastern history.

Assistant Professor Samuel Cohn: Renaissance and early modern history.

Assistant Professor William E. Kapelle: Medieval History.

Assistant Professor Alice Kelikian: Modern history. Social institutional history.

Assistant Professor Alexander Keyssar: Labor and working-class history.

Assistant Professor Hillel J. Kieval: Modern European, social and institutional Jewish history.

Assistant Professor James Kloppenburg: Intellectual and cultural history.

Assistant Professor Robert Schneider: Early modern history.

Degree Requirements

Master of Arts

An M.A. degree in History will be awarded to those students who have satisfactorily completed one year of residence at full time, fulfilled the language requirement and passed a special examination at the master's level. Students who have completed the Ph.D. qualifying examinations and the stated requirements for the master's degree automatically qualify for conferral of the master's degree.

Doctor of Philosophy

Program of Study. During the first year in the program, students will complete a major research paper and a joint colloquium in modern European history and American civilization. Within the first two years, they must also take a proseminar in early modern Europe, a historiography course and two seminars in comparative history, besides fulfilling the geographical outside-field requirement.

At the beginning of the third year, students will make an oral presentation setting their proposed dissertation topic in comparative perspective; this is called the "category examination." The student will, when feasible, spend the third or fourth year in the program abroad pursuing research for the dissertation. Arrangements can be made for conferences with foreign scholars who can advise on the subject of research.

Language Requirement. The use of foreign languages is an essential tool for the comparative historian. Each student will be expected to pass, upon admission, one language examination testing the ability to read historical prose with a dictionary. The second language examination must be passed before the student registers for the third semester. All students must show competence in either French or German; for the second language another major tongue relevant to the student's research interests may be substituted.

Qualifying Examination. Normally the student will take the qualifying examination at the end of the second year of study. Any student who has failed to complete the qualifying examination by the sixth semester will be dropped from the program.

Admission to Candidacy. A student may be admitted to candidacy for the Ph.D. degree when he or she has completed course and residence requirements, demonstrated proficiency in the required foreign languages, passed the qualifying examination and gained approval of his or her dissertation topic by the faculty of the program.

Dissertation and Defense. The student will normally define a dissertation topic in the term preceding the qualifying examination but in no case later than the end of the fifth semester in the

program. When the student's dissertation committee accepts the completed dissertation, the candidate must defend it at a final oral examination.

Courses of Instruction

Seminars

*HISTORY 190aR. Historiography

HISTORY 200a. Colloquium in European Comparative History Since the 18th Century

Comparative examination of major historical issues in Europe and the United States from the eighteenth through the twentieth centuries. *Required of first-year graduate students in the Comparative History and the History of American Civilization Programs.*

Mr. Schuker

COMPARATIVE HISTORY 201b. Colloquium in American and European Comparative History

Mr. Sneider

An introduction to the major issues and methods in the social history of Europe and the United States during the early modern periods.

COMPARATIVE HISTORY 202b. Seminar in Comparative History: Town and Country

Introduction to the methods of comparative history through a consideration of problems of Town and Country in various historical contexts.

Mr. Black

COMPARATIVE HISTORY 301 — 319a and b. Research Papers

301a and b. <i>Mr. Binion</i>	308a and b. <i>Mr. Meyers</i>	315a and b. <i>Ms. Kelikian</i>
302a and b. <i>Mr. Black</i>	309a and b. <i>Mr. Schrecker</i>	316a and b. <i>Mr. Keyssar</i>
303a and b. <i>Mr. Demos</i>	310a and b. <i>Mr. Schuker</i>	317a and b. <i>Mr. Kieval</i>
304a and b. <i>Mr. Fischer</i>	311a and b. <i>Mr. Vanger</i>	318a and b. <i>Mr. Kloppenberg</i>
305a and b. <i>Mr. Freeze</i>	312a and b. <i>Mr. Wasserstein</i>	319a and b. <i>Mr. Schneider</i>
306a and b. <i>Mr. Keller</i>	313a and b. <i>Mr. Cohn</i>	
307a and b. <i>Mr. Manuel</i>	314a and b. <i>Mr. Kapelle</i>	

COMPARATIVE HISTORY 321 — 339a and b. Research Papers

321a and b. <i>Mr. Binion</i>	328a and b. <i>Mr. Meyers</i>	335a and b. <i>Ms. Kelikian</i>
322a and b. <i>Mr. Black</i>	329a and b. <i>Mr. Schrecker</i>	336a and b. <i>Mr. Keyssar</i>
323a and b. <i>Mr. Demos</i>	330a and b. <i>Mr. Schuker</i>	337a and b. <i>Mr. Kieval</i>
324a and b. <i>Mr. Fischer</i>	331a and b. <i>Mr. Vanger</i>	338a and b. <i>Mr. Kloppenberg</i>
325a and b. <i>Mr. Freeze</i>	332a and b. <i>Mr. Wasserstein</i>	339a and b. <i>Mr. Schneider</i>
326a and b. <i>Mr. Keller</i>	333a and b. <i>Mr. Cohn</i>	
327a and b. <i>Mr. Manuel</i>	334a and b. <i>Mr. Kapelle</i>	

COMPARATIVE HISTORY 401-419. Dissertation Research

401. <i>Mr. Binion</i>	408. <i>Mr. Meyers</i>	415. <i>Ms. Kelikian</i>
402. <i>Mr. Black</i>	409. <i>Mr. Schrecker</i>	416. <i>Mr. Keyssar</i>
403. <i>Mr. Demos</i>	410. <i>Mr. Schuker</i>	417. <i>Mr. Kieval</i>
404. <i>Mr. Fischer</i>	411. <i>Mr. Vanger</i>	418. <i>Mr. Kloppenberg</i>
405. <i>Mr. Freeze</i>	412. <i>Mr. Wasserstein</i>	419. <i>Mr. Schneider</i>
406. <i>Mr. Keller</i>	413. <i>Mr. Cohn</i>	
407. <i>Mr. Manuel</i>	414. <i>Mr. Kapelle</i>	

COMPARATIVE HISTORY 500. Registration in Time

In addition, the following courses may be taken as equivalent to Comparative History seminars.

HISTORY 110a. The Civilization of the Early Middle Ages

Mr. Kapelle

HISTORY 110b. The Civilization of the High and Late Middle Ages

Mr. Kapelle

- *HISTORY 112b. The Crusades and the Expansion of Medieval Europe
- *HISTORY 113a. English Medieval History
- *HISTORY 115b. Seminar on Medieval Russia
- *HISTORY 123a. The Renaissance
- *HISTORY 123b. The Reformation
- *HISTORY 124aR. Topics in English Constitutional and Legal History
- *HISTORY 125a. The General Crisis of the 17th Century in Europe
- HISTORY 127b. L'Ancien Regime: State and Society in Pre-Revolutionary France
Mr. Schneider
- HISTORY 130aR. The French Revolution
Mr. Black
- *HISTORY 131b. Topics in Modern Social History: Industrialization and Social Change in Europe
- HISTORY 132a. Modern European Thought and Culture: Marlowe to Mill *Mr. Binion*
- HISTORY 132b. European Thought and Culture Since Darwin *Mr. Binion*
- HISTORY 133a. The Enlightenment *Mr. Manuel*
- HISTORY 133b. Topics in 19th and 20th Century Intellectual History *Mr. Manuel*
- *HISTORY 134a. 19th Century Europe: From Revolution to National Unification
- *HISTORY 134b. 19th Century Europe: Nationalism, Imperialism, Socialism (1870-1914)
- HISTORY 135a. The Jews of Central and East-Central Europe, 1740-1939 *Mr. Kieval*
- HISTORY 136a The Rise of Modern Germany, 1648-1848 *Mr. Freeze*
- HISTORY 136b. Germany, 1849-1949 *Mr. Freeze*
- HISTORY 138a. Economy and Society in Europe, 1750-1900 *Ms. Kelikian*
- HISTORY 138b. Economy and Society in Europe, 1900 to the Present *Ms. Kelikian*
- *HISTORY 141b. Studies in British History — 1830 to the Present
- *HISTORY 142b. Twentieth Century Europe
- *HISTORY 146b. Topics in German History: Hitler, Germany and Europe
- *HISTORY 147a. Rise of Imperial Russia
- *HISTORY 147b. Russia Since 1861
- HISTORY 180aR. Modern China *Mr. Schrecker*
- HISTORY 181bR. Seminar on Chinese Thought *Mr. Schrecker*
- HISTORY 182b. Modern Southeast Asian History *Mr. Steinberg*
- *HISTORY 183b. The Great Powers of the Middle East
- HISTORY 184a. Arabs and Jews in Palestine, 1881-1948 *Mr. Wasserstein*
- *HISTORY 184b. Doing History
- *HISTORY 185a. The Coming War, 1931-1941
- *HISTORY 186a. World War II
- *HISTORY 191a. History and Psychology
- *HISTORY 194b. Politics and Diplomacy in Europe, 1914-1945
- HISTORY 198bR. Science and Technology in the Twentieth Century *Mr. Schweber*

COMPARATIVE LITERATURE

See Joint Program of Literary Studies (page 83).

CROSS-REGISTRATION AT BOSTON COLLEGE, BOSTON UNIVERSITY AND TUFTS UNIVERSITY

A full-time graduate student at Brandeis University may enroll in one graduate course at Boston College, Boston University or Tufts University. Brochures suggesting courses for cross-registration at each of the host institutions are available at the graduate school office of each institution.

A student who wishes to enroll in a course at one of these institutions should consult with the instructor in the particular course and should expect to satisfy the prerequisites and requirements normally required for admission to the course, including adherence to the academic calendar of that course.

A student at Brandeis University who wishes to enroll in a graduate course at one of the host institutions should obtain a registration permit from the Graduate School Registrar and should present this permit to the Graduate School Registrar of the host institution.

ECONOMICS

Although the University does not offer graduate study in Economics, it does offer a significant group of upper-level courses which may be of interest to graduate students in other departments. These courses receive graduate credit on permission of the student's adviser.

Courses of Instruction

ECONOMICS 24a. The Soviet Economy

Mr. Berliner

ECONOMICS 32b. Comparative Systems

Analysis of structure and performance of alternative economic systems. Theoretical models to be discussed are capitalism and several varieties of socialism: utopian, market, and authoritarian. Among real world analogs, extensive attention will be given to the Soviet economy; others include the Yugoslavs, the Chinese and at least one West European "mixed" economy in which public ownership, private enterprise and some form of economic planning play substantial roles.

Mr. Schwalberg

ECONOMICS 37aR. The Political Economy of Cities

This course will consist of a formal analysis of the structure of metropolitan areas and an exploration of the set of economic and social problems that have beset city life.

Mr. Ferguson

ECONOMICS 38b. Economic Policy Issues

Six topics will be studied with the objective of applying tools of economic analyses to the understanding of important United States problems and to the development of responsible policy positions. The topics are 1) minority development, 2) the control of inflation, 3) energy dependence, 4) reviving productivity gains, 5) immigration, 6) the burden of the aged. There will be class presentations and discussions of alternative analyses and policies.

Mr. Weckstein

ECONOMICS 44bR. Economics of the Arts

The application of economic analysis to both the performing arts and the visual arts. We shall examine questions of productivity, public subsidy and the nature of demand. In addition, special topics such as industry structure, pricing policies, copyright, public television and labor unions will be covered.

Mr. Braunstein

ECONOMICS 46b. World Trade and Development

A study of the role of trade and finance in economic development. Attention will be given to the effects of capital movements of oil price increases and wealth changes, of changes in

the world monetary regime and the performance of major world financial institutions. The adaptation to these changes by specific countries will be the subject of individual research papers. There will be an opportunity for the presentation of student papers.

Mr. Weckstein

ECONOMICS 57a. The Economics of Environment and Resources

This course will deal with insights from economic theory into the optional pricing and usage of both renewable and nonrenewable natural resources. Emphasis will be placed on questions of environmental policy.

Mr. Lurie

ECONOMICS 60a. International Economic Policy

Introduction to international economic analysis through policy issues. Specific policy problems, such as the protectionist response triggered by the extraordinary growth of U.S. auto imports over the past fifteen years, provide a laboratory for examining and testing theories in two main branches in international economics: trade and protection, and finance and foreign exchange.

Mr. Coiner

ECONOMICS 65a. Economic Development

Special attention to development problems in the Mideast.

Mr. Barkai

ECONOMICS 66b. The Economics of Communes

Special reference to the economics of the kibbutz.

Mr. Barkai

ECONOMICS 74bR. Law and Economics

A study of economic foundations of American law in selected areas of interest. Topics will include: the role of property rights and liability rules in the control of externalities; controlling the cost of accidents; the control of criminal behavior; product failure and damage; medical malpractice. The effects of judgments and status will be studied.

Prerequisite: ECON 2a.

Mr. Weckstein

ECONOMICS 76bR. Labor Economics

This course will focus on two areas: (1) the operation of labor markets including labor supply, labor demand, unemployment, training and labor mobility; and (2) trade unionism and collective bargaining in the United States.

Prerequisite: ECON 2a.

Mr. Filer

ECONOMICS 80a. Microeconomic Theory

Analysis of the behavior of economic units within a market economy. Emphasis upon individuals' decisions as demanders of goods and suppliers of resources and firms' decisions as suppliers of goods and demanders of resources under various market structures. Related topics such as welfare and efficiency, market failure, and general equilibrium.

Mr. Braunstein

ECONOMICS 82bR. Macroeconomic Theory

The meaning of the national income concepts; the factors determining the level of national income, employment and prices; the influence of fiscal and monetary policies; theory of economic growth.

Prerequisite: ECON 8b.

Mr. Luckett

ECONOMICS 83a. Statistics for Economic Analysis

A first course in statistical inference. Topics include descriptive statistics, probability, normal and binomial distributions, joint distributions, sampling distributions, point and interval estimation, properties of estimators, testing of hypotheses, simple and multiple regression, analysis of variance.

Prerequisite: ECON 2a.

Mr. Dolbear

ECONOMICS 84b. Econometrics

An introduction to the construction and testing of econometric models. Both single and

multiple equation models will be studied.

Prerequisite: ECON 80a, 82b, 83a.

Mr. Luckett

ECONOMICS 89a. Introduction to Mathematical Economics

This course will focus on the application of mathematical techniques and tools in economics. Our purpose will be to investigate a variety of economic analyses in which mathematical techniques prove useful. Topics include optimization, linear and non-linear programming, discounting, the mathematics of multiple regression, economic model solving and dynamic analysis.

Mr. Pulley

ECONOMICS 134bR. The Public Sector

The theory of government and collective activities; the effects of taxation on efficiency and equity; problems of cost and choice in government expenditures. Special attention to Reagan budget changes and the proposals to require a balanced budget.

Mr. Williams

ECONOMICS 135a. Industrial Organization

Economic analysis of American industry in terms of market structure, conduct and performance. Topics included are business organization, concentration, barriers to entry, price and product policies, profits, efficiency and productiveness.

Prerequisite: ECON 80a.

Mr. Lurie

ECONOMICS 136b. Managerial Economics

An application of the skills of the economists to problems of modern managers in business, the public sector and non-profit private institutions.

Mr. Braunstein

ECONOMICS 151aR. The Economics of The Family

Seminar on the economic analysis of the marriage market, fertility behavior, investment in children, labor force participation, the household production function and the effects of taxes and subsidies on family behavior.

Mr. Berliner

ECONOMICS 159b. The Economics of Education

Economic analysis of education as a form of investment in human capital. Major topics include the evaluation of educational programs, the financing of higher education, some economics of primary and secondary education, and the impact of education upon economic growth and the distribution of income.

Mr. Schwalberg

ECONOMICS 163a. Inflation and Monetary Policy in Israel

Mr. Barkai

ECONOMICS 171a. Financial Markets

The evaluation and selection of investment assets, portfolio composition, the operation of markets for financial assets and the role of specialized financial firms.

Mr. Filer

ECONOMICS 172b. Money and Banking

The theory and practice of financial intermediation, with special reference to the behavior of commercial banks and other financial institutions. Emphasis is on analysis of the general economic role of intermediaries and the effect of risk on their operations. The techniques these firms use to cope with risk, such as loan pooling and diversification, are studied in detail. The effects of recent changes in government regulation (i.e., relaxation of Regulation Q, creation of money market funds, etc.) upon bank behavior are studied.

Mr. Lurie

ECONOMICS 179b. The Legal Regulation of Economic Activity

This course will examine the reasons for economic regulation in certain industries and the effects of regulation on efficiency, distribution of income, and innovation. Special emphasis will be placed on antitrust laws and public utility regulation. Other topics will include price discrimination, quality regulation, product safety, and environmental considerations.

Mr. Braunstein

ECONOMICS 180aR. Advanced Microeconomic Theory

Advanced topics of microeconomic analysis designed to extend, refine, apply and combine the analysis of ECON 80a and 83a. For example, the “certain” world of intermediate price theory is extended to a world where decisions are made under uncertainty — fusing decision analysis of 80a with the probabilistic methods of 83a. *Ms. Such*

ENGLISH AND AMERICAN LITERATURE

Objective

The graduate program in English and American Literature is designed to offer training in the interpretation and evaluation of literary texts with some attention to related scholarly disciplines, particularly history and linguistics. It also offers candidates who have some ability in writing an opportunity to pursue this interest as a normal part of the graduate program.

Admission

Candidates for admission should have a bachelor's degree, preferably with a major in English and American literature, and a reading knowledge of French, Italian, German, Greek, or Latin. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

Faculty

Associate Professor Alan Levitan, Chair: Shakespeare. Music and drama.

Professor Allen Grossman: Poetry and poetic structures. Seventeenth century literature. Modern and contemporary literature.

Professor Benjamin B. Hoover: Eighteenth century literature.

Professor Robert O. Preyer: Nineteenth century literature. Social and intellectual history.

Professor John H. Smith: Shakespeare, Renaissance drama. Neo-Latin literature.

Professor Peter Swiggart: American literature. Criticism theory.

Visiting Professor Daniel Aaron: Nineteenth and twentieth century American literature.

Visiting Professor Alice Walker: Fiction and poetry.

Associate Professor Philip Fisher: Nineteenth century literature. Critical theory.

Associate Professor Michael T. Gilmore, Director of Graduate Studies: Puritanism. Literature of the American Revolution. American renaissance.

Associate Professor Karen W. Klein: Medieval literature. Women's studies.

Associate Professor Richard J. Onorato: Romantic literature. Modern literature.

Associate Professor Susan Staves: Restoration and eighteenth century literature.

Assistant Professor Judith Ferster: Medieval literature.

Assistant Professor James B. Merod: Twentieth century poetry.

Assistant Professor Daniel Schenker: Nineteenth century literature. Modern literature.

Visiting Assistant Professor Richard A. Strier: Renaissance.

Writer-in-Residence Denise Levertov: Poetry.

Writer-in-Residence Geoffrey Wolff: Fiction.

Degree Requirements

Following are the degree requirements for the Department of English and American Literature. Students should also consult the General Degree Requirements and Academic Regulations found in an earlier section of this catalog.

Master of Arts

Program of Study. Each student will take English 200a. In addition, a normal program will consist of five courses, at least three of which will be 200-level seminars. Students must also

register for English 295b (Major Text Examination).

Residence Requirement. The minimum residence requirement is one year, though students with inadequate preparation may require more.

Language Requirements. A reading knowledge of a major foreign language (modern European, ancient Greek, Biblical Hebrew or Latin). The completion of the language requirements at another university does not exempt the student from the Brandeis requirement.

Qualifying Examination. An oral examination, by committees of faculty members, will be given at the beginning of the spring term on one of several major texts, the texts to be announced at the end of the fall term. This examination will test a student's ability to read and understand a major literary work or a group of short works by the same author. Admission to the Ph.D. program in addition to qualification for the M.A. degree will depend upon the results of this examination, in addition to course evaluation.

Doctor of Philosophy

Admission to the Ph.D. Program. (1) Students who complete, with distinction, the M.A. requirements at Brandeis University are admitted to the Ph.D. program by the Department upon recommendation of the Committee on Graduate Studies.

(2) Students who enter with a master's degree or a full year of graduate work in English from another university are required to fulfill the qualifying examination requirement described above under the Master of Arts Program. Provided this requirement is fulfilled, such students may, at the Department's discretion, be admitted to the Ph.D. program after successful completion of a semester at Brandeis and upon recommendation by the Committee on Graduate Studies. At the time of admission up to a year's residence and course credit for work completed elsewhere may be granted.

Program of Study. Second year students continue to take courses, usually two a semester. Students have an obligation to review their preparation in the field with their advisers and to ensure that they are acquiring both a comprehensive knowledge of the various historical periods and genres of English and American literature and a more profound knowledge of the particular period or field they propose to offer as a specialty. With the exception of English 200, no specific courses are required of all Brandeis Ph.D. candidates; each student's program will be designed in the light of the strengths and weaknesses of his or her previous preparation and in accord with his or her own interests.

A student who comes to Brandeis with a B.A. is required to take 12 courses for the Ph.D.; a student who comes with an M.A. is normally required to take 8 courses at Brandeis.

Dissertation Field Examination. All candidates for the Ph.D. will be asked to pass an oral examination in the historical period or genre in which the candidate expects to write a dissertation. This examination is taken in the third year. The examination may be taken as many times as necessary without prejudice to a student's standing in the Ph.D. program.

Residence Requirement. The minimum residence requirement is one year beyond the master's degree or two years beyond the bachelor's.

Other Requirements

Language Requirement. In addition to the language requirement that has been met for admission to the Ph.D. program, the student must (1) demonstrate a reading knowledge of a second major foreign language; or (2) demonstrate an advanced competence in the first foreign language and a knowledge of its literature; or (3) take a graduate course, ordinarily a seminar, in a field closely related to research on the dissertation. Approval of the graduate committee must be sought before such a course is taken; the student must demonstrate the relevance of the proposed course to the dissertation.

Training in Teaching. Provided openings exist, students in their second and third year in the program can be expected to be awarded at least one teaching assistantship each year, provided their academic work is of high calibre.

Admission to Candidacy. A student will be recommended by the Department for admission to candidacy for the Ph.D. degree after completing with distinction the program of study and satisfying all departmental requirements prior to the writing and defense of a dissertation. A student admitted to candidacy must have submitted a formal dissertation proposal, subject to approval by the student's dissertation director and by an additional member of the departmental faculty.

Dissertation and Defense. Each student will submit a dissertation in a form approved by his or her dissertation director and by a committee appointed by the Director of Graduate Studies. The student will defend the dissertation at a final oral examination. The dissertation may be a monograph, a series of closely related essays, a bibliographical project or a textual project.

History and Structure of English

The Department also offers an alternative program in the history and structure of the English language, with specialization in Old, Middle, or Early Modern English. For details, address the chairman of the Department.

Courses of Instruction

***ENGLISH 120b. The Tradition of the Short Poem in English**

***ENGLISH 121a. Exemplary Ancient Fictions**

ENGLISH 122aR. Old English

An introduction to the language and literature of the Anglo-Saxons. Readings will include the major extant short poems, including *The Wanderer*, *The Seafarer*, *The Dream of the Rood*, and selections from the epic poem *Beowulf*.
Ms. Klein

***ENGLISH 122b. Old English Epic**

***ENGLISH 123b. The Renaissance Ovid in England**

***ENGLISH 127a. D.H. Lawrence and Virginia Woolf**

ENGLISH 127bR. The Contemporary and the Avant-Garde

Against the background of the great innovators of the earlier twentieth century, this course will consider writers from World War II to the present, attempts at stylistic innovation. Works of fiction will be chosen from among the following: Bellow, Nabokov, Ellison, Heller, Mailer, Oates, O'Connor, Hawkes, Barth, Roth, Pynchon, Wharton, Robbe-Grillet, Garcia-Marquez.
Mr. Onorato

ENGLISH 130a. American Literature

The Inner Life: Visions and the Spirit will explore some of the ways American Literature (particularly Black and Native American) has been and is influenced by the experiencing of visions and the awareness of the "soul," "God," "the inner voice," or "inner life." Explicit in the slave narratives, particularly of black women ministers, abolitionists and slaves of the 17th, 18th and 19th centuries, and in native American masterpieces like *Black Elk Speaks*, this awareness is clearly present in many 20th century literary works, as well, including *Cane* by Jean Toomer, *Their Eyes Were Watching God* by Zora Neale Hurston and *Meridian* by Alice Walker, among others. We will also consider, in the study of these and other works, the relation of creativity to economic and social circumstances.
Ms. Walker

ENGLISH 132bR. Chaucer

An introduction to middle English and a study of some works of Chaucer, including *The Parliament of the Fowls* and *The Canterbury Tales*. We will emphasize Chaucer's ideas and the various poetic forms and narrative techniques he used to develop them.

Ms. Ferster

***ENGLISH 133aR. Advanced Shakespeare**

***ENGLISH 134a. The Women of Letters in the Eighteenth Century**

ENGLISH 135aR. Wordsworth to Stevens: The Continuity of Romantic Poetry

This course will focus on the ways in which the poetic modes developed by two major Romantic poets, Wordsworth and Keats, were continued and modified by a major Victorian poet, Tennyson, and by two of the great American modernists, Hart Crane and Wallace Stevens. Time permitting, we will trace the continuity even further into the work of some contemporary poets.

Mr. Strier

ENGLISH 135bR. Romanticism

The focus here is on Wordsworth, Blake, Keats and Shelley but we will situate these four poets in an historical perspective that will trace the development of romantic thought and writing.

Mr. Merod

***ENGLISH 136a. Whitman and his Archive**

***ENGLISH 137a. Twentieth Century Poets: Frost, Eliot, Pound**

***ENGLISH 137bR. Samuel Beckett**

***ENGLISH 142a. Intention and Interpretation in Medieval Literature**

***ENGLISH 142b. Medieval European Drama**

***ENGLISH 143aR. Elizabethan and Jacobean Drama**

ENGLISH 143bR. English Drama before Shakespeare

A representative selection of medieval and Tudor plays (liturgical, miracle, mystery, morality, interlude, early and transitional comedy and tragedy).

Mr. Smith

ENGLISH 145bR. Victorian Poetry and Poetics

Tennyson, Browning and the Crisis in Poetics: A study of the long poem and the lyric in the Victorian period.

Mr. Preyer

ENGLISH 146b. Mark Twain and His America

See American Studies 148b.

Mr. Matthews

ENGLISH 147a. Faulkner, Fitzgerald and Bellow

This course focuses upon the issue of narrative realism and the way a novelist deals with the social and psychological concerns of his day. Fitzgerald's major novels and stories will be studied along with selected novels by Faulkner and Bellow.

Mr. Swiggart

ENGLISH 147bR. Modern British and American Drama

Dramatists to be read include Shaw, O'Neil, Williams, Stoppard and Pinter.

Mr. Swiggart

***ENGLISH 148b. Classical Background of English Literature**

***ENGLISH 151b. Contemporary Critical Theories**

***ENGLISH 153b. Milton**

***ENGLISH 155a. Women as Men of Letters in Nineteenth Century England**

***ENGLISH 156a. Dissent in American Literature: From the Revolution to the Civil War**

***ENGLISH 157a. Lowell and His Generation**

***ENGLISH 157b. Modern British Drama and Theatre**

***ENGLISH 158aR. American Poetry**

***ENGLISH 161a. Theory of the Fantastic**

***ENGLISH 163aR. Renaissance Poetry (16th and 17th Century): The Lyric Poem in Renaissance England**

This course will study some of the major lyric poetries written in England between Wyatt at the beginning of the 16th century and Marvell in the middle of the 17th. Other poets to be read include Sidney, Shakespeare, Donne and Herrick. The focus of the course will be on the relation between the plain and the ornate styles in lyric poetry. *Mr. Strier*

***ENGLISH 163b. English Renaissance Tragedy**

ENGLISH 164bR. Restoration Drama

Comedy, heroic drama and tragedy between 1660 and 1800. The course will devote some attention to the history of the plays in performance. Authors to be studied include Dryden, Etherege, Wycherly, Otway, Congreve, Vanbrugh, Lillo, Garrick, Goldsmith and Sheridan. *Ms. Staves*

***ENGLISH 165a. Social Novel in the Nineteenth Century**

***ENGLISH 167a. The Irish Literary Renaissance**

ENGLISH 167bR. Contemporary Poetry: Poets and Poetry: Theory and Practice

The work of twentieth century (mainly contemporary) poets will be explored in conjunction with their essays, manifestos, and other statements of theory. *Ms. Levertov*

***ENGLISH 168a. Native American Literature**

***ENGLISH 173a. Literary and Intellectual Ferment in the English Renaissance**

ENGLISH 174b. Eighteenth Century Novel

Early developments in English fiction with some attention to theories of narrative and problems in the practical criticism of the novel. Emphasis on Defoe, Richardson, Fielding, Sterne and Austen. *Mr. Hoover*

***ENGLISH 175b. City and Psyche in Victorian Literature**

ENGLISH 176a. Hawthorne and Melville

A study of the major works of Nathaniel Hawthorne and Herman Melville. *Mr. Gilmore*

***ENGLISH 176b. Hawthorne, Melville and Poe**

ENGLISH 177b. Contemporary Women Writers

This course studies poetry and prose by women from the 1940s to the present day in terms of socio-cultural context, literary and feminist criticism. Among the authors read are Lessing, Levertov, Rich, Atwood, Walker, Broumas, Hawley and Olsen. Significant writers from earlier in this century: Woolf, Rhys, Colette, will also be included. *Ms. Klein*

ENGLISH 185aR. Dickens and Dostoevsky

The course will emphasize the modes of grotesque and philosophical comedy, the representation of the city, the romantic extension of realism, and the major literary forms of the novel of ideas and the novel of social reform. While Dickens and Dostoevsky are the central writers, novels, poems and essays by other nineteenth century writers will be included. *Mr. Fisher*

ENGLISH 187a. The Modern Novel I

This course will cover the emergence of the modern novel in English, including works by Conrad, Joyce, Stein, Lawrence, Woolf, Hemingway, Fitzgerald, Faulkner, Beckett, Nabokov, Lessing. *Mr. Onorato*

***ENGLISH 187b. The Modern Novel II**

ENGLISH 198aR. History of the English Language

See Linguistics 140aR.

Ms. Maling

Seminars

ENGLISH 200a. Methods of Literary Study: Shakespeare

Required of all first-year students.

Mr. Preyer

ENGLISH 201a. History and Theory of Criticism: The Development of Modern Critical Theories

See Literary Studies 201b.

Mr. Engelberg

ENGLISH 218a. Donne and Herbert

This course will study in detail the poetry of the major English "metaphysical" poets. The focus will be on the poetic modes Donne and Herbert developed and on questions of tradition and innovation. Readings in the prose of the two poets, in background materials and in modern criticism and scholarship, will be required.

Mr. Strier

ENGLISH 222a. Contemporary Criticism

We will look at six critical writers whose thought has increasingly shaped contemporary textual study: Nietzsche, Marx, Freud and their twentieth century counterparts Michel Foucault, Frederic Jameson and Jacques Derrida.

Mr. Merod

ENGLISH 243aR. English Renaissance Drama Exclusive of Shakespeare

Mr. Smith

ENGLISH 244b. Perspectives on American Writers, 1865-1900

This course will examine the works of such post-Civil War writers in America as William Dean Howells, John W. DeForest, Henry James, Mark Twain, Emily Dickinson, Sarah Orne Jewett, Stephen Crane and others.

Mr. Aaron

ENGLISH 254b. The Eighteenth Century: Augustanism

Why is recent scholarship engaged in a re-examination of the popular notions of the "Augustan Age"? What is the meaning of eighteenth-century fascination with scholarship and, as the more recent moderns say, "textuality"? What is the right relationship between art and learning?

Ms. Staves

ENGLISH 295b. Studies in a Major Text

Required of all first year students.

Mr. Gilmore

ENGLISH 353-369a and b. Directed Research

353a and b. *Mr. Hoover*

361a and b. *Mr. Onorato*

354a and b. *Mr. Preyer*

362a and b. *Ms. Staves*

355a and b. *Mr. Smith*

363a and b. *Mr. Schenker*

356a and b. *Mr. Swiggart*

364a and b. *Ms. Ferster*

357a and b. *Mr. Grossman*

365a and b. *Mr. Fisher*

358a and b. *Mr. Gilmore*

366a. *Ms. Levetrov*

359a and b. *Ms. Klein*

367b. *Mr. Wolff*

360a and b. *Mr. Levitan*

369a and b. *Mr. Merod*

ENGLISH 403-416. Dissertation Research

403. *Mr. Hoover*

410. *Mr. Levitan*

404. *Mr. Preyer*

411. *Mr. Onorato*

405. *Mr. Smith*

412. *Ms. Staves*

406. *Mr. Swiggart*

413. *Mr. Schenker*

407. *Mr. Grossman*

414. *Ms. Ferster*

408. *Mr. Gilmore*

415. *Mr. Fisher*

409. *Ms. Klein*

416. *Mr. Merod*

FRENCH

See Joint Program of Literary Studies (page 83).

GERMAN

See Joint Program of Literary Studies (page 83).

HISTORY

See Comparative History (page 65).

HISTORY OF AMERICAN CIVILIZATION

Objectives.

The graduate program in the History of American Civilization, leading to the degree of Doctor of Philosophy in History, has been designed primarily to educate professional scholars and teachers of American history. The curriculum emphasizes both a comprehensive understanding of American history and the mastery of historical research and writing. For a comparative view of the American experience, students will undertake selective studies in modern European, Asian, Latin American or African history. A related field of study will be defined, according to individual background and interest, in one of the following ways:

1. Training in one of the disciplines of the social sciences or humanities — politics, international relations, or literature, for example — to provide perspectives and methods that can illuminate historical problems.

2. A thematic field in American history, involving a distinctive subject matter and discipline: for example, American social history, American legal and constitutional history, American intellectual history, or American art and architecture.

3. A topic in comparative history, involving a distinctive subject matter and discipline: 20th century British and American literature, for example, or 19th century emigration/immigration, or 18th century American and European political and social philosophy.

A small, select student body works closely with the faculty in independent reading and research courses. From the beginning, individual programs are developed to prepare students for their qualifying examinations and to guide them toward their dissertation research. Normally, the first year's work is concentrated in American history, including substantial experience in directed research and a critical approach to problems of historiography. Second-year students, while pursuing further directed research, chiefly are encouraged to choose courses to complete their preparation in the examination fields. Studies in related fields are arranged individually with appropriate members of the University's graduate faculty, either through standard courses or directed readings. For selected students with appropriate qualifications, there are opportunities for advanced study and research with distinguished scholars at neighboring universities in such fields as legal history and business history. Applicants should note with care the four parts of the examination, specified under *Degree Requirements*, in which all students are expected to demonstrate proficiency.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply to candidates for admission to this program. An undergraduate major in history is the preferred preparation for admission, and the student's undergraduate curriculum should include some fundamental courses in American history and related fields in the social sciences or humanities. Students with the M.A. in history, or a professional degree in law or other related fields, are especially invited to apply. Students interested in Crown Fellowships or in the special arrangements for study in professional fields at neighboring universities, noted above, should submit applications by February 15.

Faculty

Executive Committee and Staff

Professor Marvin Meyers, Chair: Ideas and politics. Jacksonian America.

Professor John P. Demos: Family and community. Colonial America.

Professor David H. Fischer: Social and political structure. Early Republic.

Professor Morton Keller: Legal and political institutions. Modern America.

Associate Professor Gerald S. Bernstein: American art and architecture.

Assistant Professor Alexander Keyssar: Labor and working-class. Modern America.

Assistant Professor James T. Kloppenberg: Modern intellectual history.

Degree Requirements

Master of Arts

No one will be accepted in the program who is not a doctoral candidate. Applications from persons seeking a terminal M.A. degree are not welcome. However, the M.A. degree in History may be awarded to those who (1) have successfully completed one full year of residence at Brandeis University (eight half-courses), including two 200-level research courses, and (2) have passed the foreign language requirement.

Doctor of Philosophy

Program of Study. Doctoral candidates must complete two years in residence at Brandeis, and a minimum of sixteen half-courses. Programs of study and concentration will be formulated for each student, subject to the approval of the Executive Committee. Students will be required to maintain an average of B- or better in order to continue in the program. Continuance of fellowship support requires an average of A- or better. Incoming students normally will be expected to take one full course of Directed Research in American History in their first year of residence. The Committee may, at its discretion, grant a student transfer credit of up to one year toward the Ph.D. residence requirement for relevant graduate or professional work done elsewhere. Application for such credit shall be considered only after a student has completed one semester's residence in a full-time program. The second 200-level Directed Research course may be waived by the committee on the basis of a master's thesis or comparable research project at the graduate or professional level done elsewhere.

Language Requirement. A high level of reading proficiency in one foreign language is required of all students. Students are expected to pass the language examination during the first year of residence. A student who has not passed the foreign language examination by the end of the first year is not eligible for financial aid from the University for the second year. The completion of language requirements at another university does not exempt the candidate from the Brandeis requirement.

Quantitative Methods. All students in the program are urged, but not required, to attend the summer training in quantitative methods at the Newberry Library, Chicago, Illinois. In the past years, limited funds have been made available to defray expenses of students who choose to participate in the program.

Qualifying Examination. Each doctoral candidate must pass at the doctoral level a qualifying examination in the following four fields: (1) general American history, one examiner will be in early American history and the other in modern American history; (2) a period of specialization in American history; (3) an area of comparative modern European, Asian, Latin American or African history; (4) a related field of study, involving one of the disciplines in the social sciences or the humanities. (Note the three alternative approaches for the fourth field specified under Objectives.) The period of specialization will normally be selected from the following: 1607-1763, 1763-1815, 1815-1877, 1877-1914, 1914-present. The special period may be redefined on request, for good academic reasons. All proposed fields must be submitted in writing and approved by the Executive Committee. Students entering the program without previous graduate training in American history are expected to take the Qualifying Examination no later than the end of their fifth semester of residence and must pass the examination by the end of the sixth semester. Students who have earned an M.A. in history elsewhere, or who have one year of transfer credit for work taken elsewhere, are expected to take and pass the Qualifying Examination by the end of their second year in the program.

Unless the student elects a single three-hour oral examination on all four fields, the Qualifying Examinations will be taken separately in each of the fields, with the general American field coming at the end. For each of the fields (2), (3), and (4), as above, the student will choose one appropriate professor with the approval of the chairman of the program. That professor, in consultation with the student, will define the requirements, course of preparation, and mode of examination (written and/or oral) for the field.

For the general American field, the Chairman will appoint two members of the Executive Committee as examiners. The student may choose a one-hour oral examination or a three-hour written examination followed, if the examiners so require, by an oral examination. In either case, the two professors in consultation with the student will define in advance the major themes or problems on which the examination will be based. So far as possible, fields (3) and (4), as above, should be selected with a view to broadening and deepening the student's understanding of his or her American history fields, and providing valuable background for the dissertation work.

With the consent of the Chairman and the professor concerned, qualified students in appropriate cases may be examined in fields (3) or (4), as above, by a faculty member at another university. Moreover, with the consent of the Executive Committee, examinations in fields (3) or (4), as above, may be waived for students with the M.A., J.D., or other advanced degrees that represent a level or kind of training and achievement fully equivalent to those required in the Brandeis examinations for those fields.

Admission to Candidacy. A student may be admitted to candidacy for the Ph.D. degree upon satisfactory completion of the following: course and residence requirements, demonstration of a high level of proficiency in one foreign language, the qualifying examinations, and when the prospectus for a dissertation is approved by the Executive Committee.

Dissertation and Defense. When the dissertation is accepted by the Committee, a final oral examination will be scheduled at which the candidate must successfully defend his or her dissertation before the Committee and other members of the faculty who may participate. After a candidate has successfully defended the dissertation, he or she will give a public lecture.

Courses of Instruction

*HISTORY 190a. Historiography

HISTORY 200a. Colloquium in American and European Comparative History Since the 18th Century

Comparative examination of major historical issues in Europe and the United States from the eighteenth through the twentieth centuries. *Required of first-year graduate students in the History of American Civilization and Comparative History programs.*

Mr. Schuker

HISTORY 201b. Colloquium in American and European Comparative History

An introduction to the major issues and methods in the social history of Europe and the United States during the early modern and modern periods.

Mr. Schneider

HISTORY 202bR. Seminar in Comparative History: Town and Country

Introduction to the methods of Comparative History through a consideration of the problems of Town and Country in various historical contexts.

Mr. Black

HISTORY 201aA-208aA. Directed Research in American History

Students will normally elect one of the following in the fall term of the first and the second years. Each is designed to provide experience in designing, researching and writing a substantial essay of a monographic character, based on extensive use of sources. This is the equivalent of a full course and extends the due date for the final draft of the paper to March 1, to permit sufficient time for a major project. Specific research topics are selected by the student in consultation with the professor.

201aA. Topics in American Art and Architecture

Mr. Bernstein

203aA. Topics in American Colonial History

Mr. Demos

204aA. Topics in Social History, with Emphasis on the Early Republic

Mr. Fischer

205aA. Topics in Modern America

Mr. Keller

207aA. Topics in Political and Social Thought, with Emphasis on the Period 1750-1850

Mr. Meyers

208aA. Topics in Modern American Labor: Working-Class History

Mr. Keyssar

HISTORY 290aA. Topics in Modern Intellectual History

Mr. Kloppenberg

HISTORY 301-309. Readings in the History of American Civilization

The following are available in either semester:

301a or b. *Mr. Bernstein*

307a or b. *Mr. Meyers*

303a or b. *Mr. Demos*

308a or b. *Mr. Keyssar*

304a or b. *Mr. Fischer*

309a or b. *Mr. Kloppenberg*

305a or b. *Mr. Keller*

The following courses are offered on a regular basis to groups of students who wish to use them in order to prepare for their general examinations.

HISTORY 313-319. Readings in the History of American Civilization

313a or b. Colonial History, 1607-1750

Mr. Demos

314a or b. American Social History, 1750-1870

Mr. Fischer

315a or b. Political History, 1870-present

Mr. Keller

317a or b. American Intellectual History, 1750-1870

Mr. Meyers

318a or b. American Social History, 1870-present

Mr. Keyssar

319a or b. American Intellectual History, 1870-present

Mr. Kloppenberg

HISTORY 401-409. Dissertation Research

401. <i>Mr. Bernstein</i>	407. <i>Mr. Meyers</i>
403. <i>Mr. Demos</i>	408. <i>Mr. Keyssar</i>
404. <i>Mr. Fischer</i>	409. <i>Mr. Kloppenberg</i>
405. <i>Mr. Keller</i>	

For courses available to History of American Civilization students in other historical areas, see the listings by department and programs in the Graduate School and College catalogs, especially under Comparative History.

In addition, the following courses may be taken as equivalent to History of American Civilization seminars:

HISTORY 150a.	Colonial America: People, Culture and Society	<i>Mr. Demos</i>
HISTORY 151a.	The Founding of the American Republic	<i>Mr. Meyers</i>
*HISTORY 151b.	Male and Female in the American Past	
*HISTORY 152b.	Democracy in America: Tocqueville and The Age of Jackson	
*HISTORY 154b.	The History of Modern America	
HISTORY 156aR.	American Social History, 1750-1860	<i>Mr. Fischer</i>
*HISTORY 156b.	American Society: An Analytical History, Civil War to the Present	
HISTORY 158a.	Working Class History in the United States	<i>Mr. Keyssar</i>
HISTORY 158b.	The United States in the 1930's	<i>Mr. Keyssar</i>
*HISTORY 159a.	Immigration and Immigrants in American History	
*HISTORY 159b.	Family and Society in American History	
*HISTORY 160aR.	Adams and America	
HISTORY 161a.	The American Political Tradition: Origins of the Civil War	<i>Mr. Meyers</i>
HISTORY 161b.	The American Polity	<i>Mr. Keller</i>
*HISTORY 162b.	The American Political Tradition Since the Civil War	
*HISTORY 167b.	Topics in American Legal History	
*HISTORY 169a.	Thought and Culture in Modern America	
*HISTORY 191a.	History and Psychology	

JOINT PROGRAM OF LITERARY STUDIES

Comparative Literature, French German Russian and Spanish

Objectives

The joint program of literary studies accepts students desirous of obtaining an M.A. and/or Ph.D. degree in one of the areas listed above. Interdisciplinary in design, the program aims to train literary scholars and teachers whose professional capabilities will be broader than their individual specialties. Students will have the opportunity to study the theory of literature, history and theory of literary criticism, and scholarly methodology in addition to the specific literatures in which the degree will be earned. A small and carefully selected student body will work closely with the faculty of the program and with one another in a core curriculum before specializing. Students are encouraged to plan an individual program of studies within their field of interest in consultation with their adviser(s). Although the program encourages individual initiative, with the advice and consent of adviser(s), it should be stressed that all students, whatever their areas, must master the basic literature, primary and secondary, in their field. The General Examinations will assume both breadth and depth of such knowledge. (Reading lists for each area are available.)

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program. Applications must be received no later than March 1. Please be sure to mark clearly the *area* of your choice (Comparative Literature, French, German, Russian or Spanish) on the application form. Each applicant must submit at least *one* college-level essay on a literary subject (which may be written in English) as a sample of work.

Faculty

Committee:

Professor Harry Zohn, *Chair* (German)

Professor Edward Engelberg (Comparative Literature)

Professor Denah Lida (Spanish)

Professor Murray Sachs (French)

Associate Professor Robert Szulkin (Russian)

In addition, all faculty members of the Departments of Germanic and Slavic Languages and Romance and Comparative Literature participate in this program.

Degree Requirements

Master of Arts

Students who have completed two years of full-time study in residence may be awarded the M.A. degree. Such students must be in good standing (no incompletes). In addition, such students must have passed the language requirement, either by certification and/or examination, as follows: single area candidates: *one* foreign language *other* than the major language; comparative literature candidates: *Two* foreign languages *other* than the major language. Finally, such students must have passed satisfactorily the Qualifying Examinations.

Doctor of Philosophy

Program of Study. Individual programs of study will be arranged between students and their advisers. The core curriculum consists of several elements: all students in the program are obligated to enroll in Literary Studies 201 (The History and Theory of Criticism); all students will be held responsible for certain works on literary theory, literary history and aesthetics (not studied in the criticism seminars) at the time of General Examination.

Although the program is designed to permit students to develop their studies coincident with their interests and talents, and in consultation with their adviser(s), full-time students are expected to enroll in at least *three* literary studies seminars each year during the first two years of residence. In addition to Literary Studies 201, first-year students are expected to augment this schedule with *at least* two additional seminars from the literary studies offering.

Residence Requirements. The minimum residence requirement is two years of full-time study beyond the bachelor's degree. Additional course work during the third year is generally recommended.

Language Requirement. Students will be asked to demonstrate a reading competence in *at least* two foreign languages to be determined in consultation with their advisers. In certain areas of specialization, additional languages (e.g., Latin) may become necessary research tools. (Comparative literature students should consult the special statement of language requirements below.) Students must be certified in at least one language by the end of the first year in residence.

Qualifying Examinations. Qualifying examinations must be taken at the start of a student's second full year in residence, with the purpose of determining that the student is qualified to study literature productively at the graduate level. Only students who have a complete and satisfactory record for their first year will be permitted to take the Qualifying Examinations. *No postponement of these examinations is allowed.* The examinations are both written and oral, and will be scheduled each year for the third or fourth week in September. The examinations are prepared and conducted by a three-member faculty committee chosen at the end of the first year of study by the candidate in consultation with the candidate's faculty adviser. At the outcome of the examination, the candidate receives a detailed written evaluation from the three-member committee, based on the written and oral performances and on the entire record of the candidate's first year in residence.

General Examinations. Students may take the General Examinations, which demonstrate full competency in their chosen discipline, whenever they and their advisers feel they can appropriately do so. However, all students are expected to have completed the General Examinations no later than the fall semester of their fourth year in residence. Examinations will be offered twice each academic year, in October and May, and will consist of three written examinations and an oral examination. Details about the contents and procedures are available on request.

Admission to Candidacy. Candidates will be recommended for admission to doctoral candidacy when the residence and language requirements have been met, the General Examinations have been successfully passed, and a prospectus of the candidate's proposed dissertation topic has been approved by a committee of the area concerned.

Dissertation and Defense. The completed dissertation must be read and found acceptable by its director and two other readers before the candidate is eligible for the Final Oral Examination. The Final Oral Examination will be conducted by a committee of not less than four, one of whom must come from outside the candidate's area.

Teaching. All students in the program are expected to do some supervised teaching, either as a teaching assistant or by means of other arrangements. In some areas, where teaching assistantships may at times be unavailable, students will be expected to fulfill some teaching opportunities (occasional class lectures, for example) without remuneration.

For Candidates in Comparative Literature.

1. Any student in the program who declares candidacy in comparative literature should decide, as soon as possible, on a *major* and *minor* literature. The *major* literature must be one of those offered by either the Department of German and Slavic Languages or Romance and Comparative Literature (but not Italian). The *minor* literature may be Italian, English, American or any other literature offered by the University. Exact "proportions" cannot be stated in advance and will be worked out in consultation between students and adviser(s).

2. Candidates in comparative literature are expected to take three language examinations as follows:

a. The major language, which should be near level of mastery (reading, writing and speaking) on acceptance to the program. Students may simply be "certified" for this language if their level of competence is obvious.

b. The second foreign language should be mastered as a reading language with a fluency that will permit easy access to all primary and secondary literature in the specified area.

c. The third foreign language should be a reading tool for primary and especially secondary materials.

It is quite possible that for certain areas of specialization — Medieval, Renaissance, etc. — additional languages will become necessary (e.g., Latin, Catalan, Old French).

Courses of Instruction

- LITERARY STUDIES 201a.** History and Theory of Criticism: The Development of Modern Critical Theories *Mr. Engelberg*
- LITERARY STUDIES 202bR.** Fiction: Theory and Practice *Mr. Sachs*
- *LITERARY STUDIES 203aR.** Romantic Phenomena
- *LITERARY STUDIES 204bR.** Theory and Practice of Literary Translation
- *LITERARY STUDIES 205a.** Crosscurrents in the French and English Enlightenments
- *LITERARY STUDIES 206b.** The Comic in Literature: Theory and Practice
- *LITERARY STUDIES 207a.** Marxist Criticism: Literature and Society in Early Modern Europe
- *LITERARY STUDIES 208b.** Cervantes in his European Context: Heritage and Lineage
- *LITERARY STUDIES 209a.** Modern Phenomena
- LITERARY STUDIES 210b.** Genesis and Development of a Myth: Don Juan *Ms. Lida*
- *LITERARY STUDIES 211a.** The Tragic in Literature
- *LITERARY STUDIES 212b.** Techniques of Stylistic Analysis
- *LITERARY STUDIES 213b.** Modes of the Grotesque in Art and Literature
- LITERARY STUDIES 301-305.** Readings in Area Studies: Tutorials
- 301a and b. Comparative Literature. Readings in Comparative Texts *Mr. Engelberg and Staff*
- 302a and b. French. Readings in French Texts *Mr. Sachs and Staff*
- 303a and b. German. Readings in German Texts *Mr. Zohn and Staff*
- 304a and b. Russian. Readings in Russian Texts *Mr. Szulkin and Staff*
- 305a and b. Spanish. Readings in Spanish Texts *Ms. Lida and Staff*
- LITERARY STUDIES 351-355.** Directed Research
- Open to advanced graduate students with the consent of the instructor and the chairman of the Literary Studies Program.
- 351a and b. Comparative Literature *Mr. Engelberg and Staff*
- 352a and b. French *Mr. Sachs and Staff*
- 353a and b. German *Mr. Zohn and Staff*
- 354a and b. Russian *Mr. Szulkin and Staff*
- 355a and b. Spanish *Ms. Lida and Staff*
- LITERARY STUDIES 400.** Dissertation Research *Staff*

Following is a list of selected courses in each of the areas that constitute the Joint Program of Literary Studies, which may be of special interest to graduate students. For a full list of all courses available consult the undergraduate catalog under Departments of Germanic-Slavic Languages and Romance and Comparative Literature.

Comparative Literature

- *COMPARATIVE LITERATURE 102a.** Love in the Middle Ages
- COMPARATIVE LITERATURE 103b.** Madness and Folly in Renaissance Literature
- A study of the theme of madness and folly as exemplified by the major writers of the Renaissance, including Erasmus, Rabelais, Montaigne, Ariosto, Shakespeare and Cervantes. *Mr. Lansing*

COMPARATIVE LITERATURE 104a. France and England: Rationalism and Revolution

Literature of the early modern period spanning rationalism, classicism and the social ferment of two revolutions. Will deal with the literary and historical foundations of the problematics of Western society today: breakdown of intellectual order, search for artistic forms, the state and the individual, class conflict, sexism, racism. Readings in Hobbes Descartes, Pascal, Behn, Rousseau, Wollstonecraft, Defoe, Montesquieu, Godwin, Mary Shelley.

Ms. Harth

***COMPARATIVE LITERATURE 105b. Crisis of Conscience: 1715-1830**

***COMPARATIVE LITERATURE 106a. Themes in European Romanticism: Disorder and Early Sorrow**

***COMPARATIVE LITERATURE 107b. Themes in European Modernism: The Rage for Order**

COMPARATIVE LITERATURE 110b. The Development of a Genre

Survey of Western theater from Classical times to the twentieth century. Major trends in tragedy and comedy pursued and several themes followed in versions from earliest to modern interpretations. Literary aspects stressed with some attention to factors influencing presentation. Works include: *Hippolytus, The Brothers, Everyman, Sheepwell, The Misanthrope, Phedre, The Tempest, Maid of Orleans, Wild Duck, Government Inspector, St. Joan, Yerma.*

Ms. Lida

***COMPARATIVE LITERATURE 121b. Dancing the Orange: Studies in Poetic Resonance**

COMPARATIVE LITERATURE 125a. Women in Literature

A study of the cultural and personal assumptions writers bring to their characterizations of women. Works by women authors are emphasized.

Ms. Collard

***COMPARATIVE LITERATURE 137a. Dada and Surrealist Practice**

***COMPARATIVE LITERATURE 141b. The Picaresque Novel**

COMPARATIVE LITERATURE 144bR. The Outsider as Artist and Lover

Autobiographical, philosophical and literary writings of Kierkegaard, Baudelaire and Kafka who exemplify the struggle to achieve meaning in an antagonistic age. All were "alienated" writers who believed that their dedication to art or God required them to renounce love and marriage. We shall explore the interrelation of creativity, religious experience and human intimacy in their writings, using Martin Buber to define these problems in today's terms.

Mr. Kaplan

***COMPARATIVE LITERATURE 170b. Modern Tragedy**

***COMPARATIVE LITERATURE 174a. Sex, Class and Literature in Europe, 1830-1914**

COMPARATIVE LITERATURE 175bR. The Psychological Novel

The readings are designed to achieve two goals: 1) to study the development of "psychological techniques" in narrative fiction; 2) to study a particular motif which lends itself especially to expression through such techniques. The course will explore various forms of "infidelity," "betrayal," and human guilt. Readings in Mme. de Lafayette, Goethe, Flaubert, James, Fontane, Conrad, Woolf, Robbe-Grillet, Faulkner.

Mr. Engelberg

***COMPARATIVE LITERATURE 180a. Versions of the "Absurd"**

COMPARATIVE LITERATURE 185aR. Dickens and Dostoevsky

See English 185aR.

Mr. Fisher

***COMPARATIVE LITERATURE 186a. Crosscurrents in the English, French and German Enlightenment**

COMPARATIVE LITERATURE 187b. Fictive Knowledge in the Twentieth Century

Many of this century's great novels claim to summarize the past and see into the future. Are these claims legitimate? How adequate are Proust's or Musil's masterworks as social documents? Are Durrells's metaphysical pretensions legitimate? Do Lessing and Grass manage to break out of the bounds of fiction in order to create a new and viable instrument of knowledge?

Mr. Yglesias

***COMPARATIVE LITERATURE 192a. The Faust Theme in European Literature**

***COMPARATIVE LITERATURE 193a. Native American Literature**

***COMPARATIVE LITERATURE 195a. Crime and Punishment: Variations on a Literary Theme**

***COMPARATIVE LITERATURE 199b. The Roots of Literature**

French

FRENCH 109b. Contemporary French Civilization

A course for students who seek to acquire a working knowledge of social, economic, political and cultural issues of contemporary France, and to develop fluency in French. Also of interest to students contemplating study abroad, as well as careers in international business, government and law. Readings: press articles, essays by Barthes, de Beauvoir, Sartre, and others; films, slides, tapes of radio broadcasts, political speeches, interviews, songs.

Ms. Scouras

***FRENCH 112a. The French Middle Ages**

FRENCH 116bR. The French Renaissance

An examination of sixteenth century French literature as it comes to terms with cultural renewal. Background: the Italian influence; Humanism and Protestantism: Platonism. Readings from Rabelais, the Pleiade (Ronsard and Du Bellay), Montaigne and others.

Mr. Joseph

***FRENCH 117a. French Classicism**

FRENCH 118bR. The French Enlightenment: Mirrors and Masks in Eighteenth-Century French Fiction

A close reading of eighteenth-century novels, plays and *contes* to investigate the fabric of recurring themes (devices of self-advantage; coquetry, hypocrisy, manipulation of others, etc.) and various modes of literary self-consciousness (self-conscious narration, the explicit relationship between spectator and spectacle, etc.). Texts include works by Prévost, Marivaux, Rousseau, Voltaire, Diderot, Beaumarchais, Laclos.

Ms. Good

FRENCH 119aR. French Romanticism

The Romantic revolution dominated France during the first half of the nineteenth century. We shall study Victor Hugo's central contributions and principal works of fiction; poetry and drama by Balzac, Lamartine, Vigny, Musset. Selections from Baudelaire will exemplify the breakdown of French Romanticism.

Mr. Kaplan

FRENCH 123b. The Feminine Tradition in French Literature

By studying a series of texts by women writers, the course will examine the evolution of the position of the woman writer from the Middle Ages to the twentieth century. Among the problems to be considered: how women perceive themselves, their view of the relationships between the sexes, the influence of social conditions, the transformation of literary conventions by women. Conducted in French.

Ms. Boulton

***FRENCH 125a. French Poetry from the Middle Ages to the Revolution**

***FRENCH 138bR. Nineteenth Century French Fiction**

FRENCH 140b. Twentieth Century French Theater

A study of twentieth century theater in France, with some reference to trends outside of France. Authors studied will be chosen from among the following: Jarry, Giraudoux, Claudel, Sartre, Camus, Beckett, Anouilh, Genet. *Mr. Wander*

***FRENCH 149a. Twentieth Century French Fiction**

***FRENCH 150b. Modern French Poetry**

***FRENCH 155a. Literature and Ideology**

***FRENCH 160a. From Anti-Rationalism to "Engagement" in Modern French Literature**

FRENCH 170bR. The Moralist Tradition in French Literature

An examination of the classical "Moralistes" (LaRouchefoucauld, Mme. de La Fayette, LaBruyere), and those they influenced in the 18th, 19th and 20th centuries: Montesquieu, Rousseau, Laclos, Stendhal, Proust, Camus. *Mr. Gendzier*

***FRENCH 180b. Modern French Critical Thought**

German

***GERMAN 102a. German Literature before 1700**

***GERMAN 110a. Introduction to the Life and Works of Goethe**

***GERMAN 120a. Enlightenment, Storm and Stress, Idealism: Lessing, Lenz, and Schiller**

GERMAN 130b. German Romanticism

The course studies literary and theoretical works of the Romantic movement and examines concurrent attitudes toward the German past, religion, philosophy, art, music and science. Lectures and readings in German. *Mr. Hofmeister*

GERMAN 140a. German Literature in the Nineteenth Century

A study of German, Austrian and Swiss prose, poetry and drama from Heine to Hauptmann, including the major figures of "Young Germany," Poetic Realism, and Realism (Büchner, Droste-Hülshoff, Mörike, Grillparzer, Gotthelf, Hebbel, Stifter, Nestroy, Keller, Raabe, Fontane, etc.). Lectures and readings in German. *Mr. Zohn*

GERMAN 150aR. The Jewish Contribution to German Literature

This course will examine the literary harvest of the German—Jewish symbiosis from the Minnesinger Süsskind von Trimberg to Nelly Sachs, the poetess of the Holocaust, concerning itself with those Jewish writers in or from Germany (Heine, Wasserman, Lasker-Schüler), Austria (Beer-Hoffman, Schnitzler, S. Zweig), and Czechoslovakia (Kafka, Brod, Werfel) whose writings reflect Jewish themes or were shaped by the creative tension between the writers' Jewishness and the culture of German-speaking countries.

Lectures and discussions in English. Students with advanced preparation will be expected to do the reading in German. *Mr. Zohn*

***GERMAN 160b. German Drama and Lyric Poetry from Naturalism to the Second World War**

GERMAN 170bR. German Literature Since the "Year Zero" (1945)

We will trace the efforts of a new generation of German writers in both West and East Germany to come to terms with the horrors of war and totalitarianism and with the materialism of the post-war "economic miracle." Literary investigation will focus on major writers and poets such as Grass, Johnson, Lenz, Wolf, Böll, Celan, Sachs, Bachmann, Dürrenmatt, Frisch, Weiss and Handke. Class discussions will be in English. Readings available in German and in English translation. Viewing of recent German films

will supplement reading material.

Mr. Frey

***GERMAN 180a. Twentieth Century Prose: Mann, Kafka, Hesse**

***GERMAN 190b. Vienna at the Turn of the Century**

***GERMAN 195b. The Culture of the Weimar Republic
Italian**

***ITALIAN 110b. Modern Italian Literature**

***ITALIAN 140a. Dante's *Divine Comedy*
Russian**

***RUSSIAN 110a. Advanced Readings in Russian**

***RUSSIAN 112b. Theory of Language (Proto-Slavic)**

***RUSSIAN 117a. Pre-Nineteenth Century Russian Literature**

RUSSIAN 130a. Nineteenth Century Russian Literature

A comprehensive survey of the major writers and themes of the nineteenth century, including Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov and others. Conducted in English. Readings available in Russian and in English translation. Ms. Dalton

***RUSSIAN 134b. Stories and Plays of Chekhov**

***RUSSIAN 145b. Nabokov**

RUSSIAN 146a. Dostoevsky

A comprehensive survey of Dostoevsky's life and works, with special emphasis on his five major novels. Conducted in English. Readings available in Russian for concentrators, and in English translation. Ms. Dalton

***RUSSIAN 148a. Survey of Russian Theater from 1719 to 1917**

RUSSIAN 148bR. Survey of Twentieth Century Russian Theater

Mr. Szulkin

***RUSSIAN 149b. Twentieth Century Russian Literature**

***RUSSIAN 161b. The Structure of Modern Russian**

Spanish

SPANISH 120a. Cervantes: In Depth Study of *Don Quijote*

Ms. Lida

***SPANISH 125a. The Seventeenth Century**

***SPANISH 130a. Nineteenth Century Spanish Literature**

SPANISH 140a. Masters of Spanish Poetry

Topic for 1982-83: Bécquer, A. Machado, and the Generation of 1928. Mr. Yglesias

***SPANISH 150a. Spanish Drama of the Siglo de Oro**

SPANISH 160a. Studies in Latin America Literature I

Topic for 1982-83: Censorship and literature in military South America. This course will concentrate on the effect of censorship on literature in the *Cono Sur*, i.e. Argentina, Chile, Paraguay and Uruguay. The approach will combine historical-political and literary analysis. Much of the reading will be in Spanish. Ms. Méndez-Faith and Mr. Vanger

SPANISH 160b. Readings in Latin American Literature II

Topic for 1982-83: Short Prose Fiction.

A study of the development of the short story and short prose fiction in general, as an artistic genre in Latin America with emphasis on changes in attitudes and techniques. Reading and analysis of stories by such writers as Echeverría, Darío, Quiroga, Borges,

Arreola, Carpentier, Rulfo, Anderson-Imbert, Cortázar, Fuentes, García Marquez.

Ms. Mendez-Faith

***SPANISH 161aR. Masters of Modern Latin American Poetry**

SPANISH 162b. Studies in Argentine and Brazilian Literature

A study of man and nature (Sarmiento, Hernández, da Cunha) and of the inner man (Machado de Assis, Borges, Cortázar).

Mr. Duffy

***SPANISH 163b. Colonial and Nineteenth Century Latin American Literature**

***SPANISH 170bR. The Generation of 1898**

SPANISH 180b. Twentieth Century Spanish Literature

A critical analysis of the theater of twentieth century Spain. Particular attention will be paid to the influence of the Spanish Civil War on the thematic preoccupations and the structural evolution and experimentation with this genre. Dramatists represented are Benvente, Unamuno, Valle-Inclán, Lorca, Arabal and Ruibal.

Ms. Rauchwarger

MATHEMATICS

Objectives

The graduate program in mathematics is designed primarily to lead to the Doctor of Philosophy degree. The formal course work is devoted to giving the student a broad foundation for work in modern pure mathematics. An essential part of the program consists of seminars on a variety of topics of current interest in which mathematicians from Greater Boston often participate. In addition, the Brandeis-Harvard-M.I.T. Mathematics Colloquium gives the student an opportunity to hear the current work of eminent mathematicians from all over the world.

Admission

The general requirements for admission to graduate work in mathematics are the same as those for the Graduate School as a whole. The Department has available a variety of fellowships and scholarships for well-qualified students. To be considered for such financial support the student should submit an application by February 1.

Faculty

Professor David Eisenbud, Chair: Commutative Algebra. Algebraic Geometry. Knot Theory and Singularities of Complex Varieties. C^∞ Functions.

Professor Maurice Auslander: Non-commutative Algebra. Homological Algebra.

Professor Edgar H. Brown Jr.: Algebraic Topology: Manifolds, Cobordism, Surgery, Homotopy, Theory.

Professor David A. Buchsbaum: Commutative Algebra. Homological Algebra.

Professor Harold I. Levine: Differential Topology. Singularities of Differential Maps.

Professor Jerome P. Levine: Differential Topology. Knot Theory and Related Algebra.

Professor Teruhisa Matsusaka: Algebraic Geometry. Classification and Deformations of Algebraic Varieties.

Professor Alan L. Mayer: Classical Algebraic Geometry and Related Topics in Mathematical Physics.

Professor Paul B. Monsky: Number Theory. Arithmetic Algebraic Geometry.

Professor Richard S. Palais: Non-linear Partial Differential Equations. Calculus of Variations in Geometry of Mathematical Physics. Transformation Groups.

Professor Gerald W. Schwarz: Smooth and Algebraic Transformation Groups, especially Orbit Structures. C^∞ Functions on \mathbb{R}^n .

Associate Professor Mark Adler: Analysis: Differential equations, completely integrable systems.

Associate Professor Michael Harris: Arithmetic of Abelian Varieties Over Number Fields. Class Field Theory. P-adic Representation Theory. L-Functions.

Associate Professor Kiyoshi Igusa: Algebraic K-Theory.

Visiting Associate Professor Amitai Regev: Algebra

Associate Professor Pierre Van Moerbeke: Stochastic Processes. Korteweg-de Vries Equation. Toda Lattices.

Visiting Assistant Professor Ragnar-Olaf Buchweitz: Algebraic Geometry, deformation theory.

Assistant Professor Jeanne Dufloc: Topology and Algebraic K-theory.

Assistant Professor Robert Indik: Number Theory.

Assistant Professor Andrew Nicas: Algebraic Topology: manifolds, surgery.

Assistant Professor Ziv Ran: Algebraic Geometry: abelian varieties, algebraic cycles.

Assistant Professor Steven Rosenberg: Differential Geometry and Analysis of Manifolds.

Visiting Assistant Professor Arnold Wiedemann: Homological Algebra.

Degree Requirements

Master of Arts

1. One year's residence as a full-time student.
2. Successful completion of an approved schedule of courses.
3. Satisfactory performance in the three first-year courses in algebra, analysis, topology and geometric analysis — or equivalent examinations (see Program of Study).
4. Proficiency in reading French, German, or Russian.

Doctor of Philosophy

1. Residence as a full-time student for two years.
2. Successful completion of an approved schedule of courses.
3. Superior performance in the first-year courses in algebra, analysis, topology and geometric analysis — or equivalent examinations (see Program of Study).
4. Participation in the Second-Year Seminar.
5. Superior performance in the Qualifying Examination.
6. Proficiency in reading two of French, German or Russian.
7. Doctoral dissertation approved by the Department.
8. Final examination consisting of the defense of dissertation.

Program of Study. The normal first year of study consists of Mathematics 101a and b, 111a and b, and 121a and b. In exceptional circumstances and only with the permission of the graduate adviser, a student with superior preparation may omit one or more of these courses and elect higher level courses instead. In this case he or she must take an examination in the equivalent material during the first year. The second year's work will normally consist of Mathematics 110a and higher level courses in addition to preparation for the qualifying examinations described below and participation in the second-year seminar. Upon completion of the qualifying examinations, the student will choose a dissertation adviser and begin work on a thesis. This should be accompanied by advanced courses and seminars.

Qualifying Examination. The Qualifying Examination consists of two parts: a major examination and a minor examination. Both are normally taken in the latter part of the second year

but may occasionally be postponed until early in the third year. For the major examination the student will choose a limited area of mathematics, e.g. differential topology, or several complex variables, or ring theory — and a major examiner from among the faculty. Together they will plan a program of study and a subsequent examination in that material. The aim of this study is to prepare the student for research toward the Ph.D. The minor examination will be more limited in scope and less advanced in content. The procedures are similar to those for the major examination, but its subject matter should be significantly different.

Admission to Candidacy. To be admitted to candidacy for the Ph.D. degree in Mathematics, the student must have successfully completed the qualifying examination, must demonstrate proficiency in reading French, German or Russian and must be recommended for candidacy by the department.

Dissertation and Defense. The doctoral degree will be awarded only after the submission and acceptance of an approved dissertation and after the successful defense of that dissertation.

Courses of Instruction

MATHEMATICS 101a and b. Algebra I

Groups, rings, modules. Galois theory, affine rings and rings of algebraic numbers. Multi-linear algebra. The Wedderburn Theorem. Other topics as time permits.

Fall Term: Mr. Monsky

Spring Term: Mr. Regev

MATHEMATICS 110a. Geometric Analysis

Manifolds, tangent vectors and vector fields. Sard's Theorem and the embedding theorems. Basic properties of Lie groups. Riemannian structures and convex neighborhoods. Differential forms and DeRham's Theorem.

Mr. H. Levine

MATHEMATICS 110b. Geometric Analysis

Introduction to the theory of smooth mapping: transversality and stability.

Mr. Harris

MATHEMATICS 111a and b. Analysis I

Measure and integration, Hilbert and Banach spaces. The Cauchy Integral Theorem, the calculus of residues, and the maximum modulus principle. Conformal mappings. Other topics as time permits.

Fall Term: Mr. G. Schwarz

Spring Term: Mr. Adler

MATHEMATICS 121a and b. Topology I

Point set topology, fundamental group, covering spaces. Simplicial complexes, elementary homology and cohomology theory with applications. Manifolds and orientation, cup and cap products, Poincare duality. Other topics as time permits.

Fall Term: Mr. J. Levine

Spring Term: Mr. Stark

MATHEMATICS 200aR. Second Year Seminar

Mr. H. Levine

MATHEMATICS 201a. Algebra II

Schur functors and commutative rings.

Mr. Buchsbaum

*MATHEMATICS 201b. Algebra II

MATHEMATICS 202a and b. Algebraic Geometry I

An introduction to the subject of algebraic geometry.

Mr. Buchweitz

MATHEMATICS 203a and b. Algebraic Number Theory

Mr. Indik

MATHEMATICS 204a and b. Representation Theory of Artin Algebras

Existence and applications of almost split sequences to representations of artin algebras and classical orders. Higher dimensional lattices and orders. *Fall Term: Mr. Auslander*
Spring Term: Mr. Bongartz

MATHEMATICS 211a and b. Analysis II

Topics in complex analysis.

Fall Term: Mr. Palais
Spring Term: Mr. Schwartz

MATHEMATICS 221a. Topology II

Elementary homotopy theory, fibrations, obstruction theory, and spectral sequences.

Mr. Igusa

MATHEMATICS 221b. Topology II

Cohomology operations, characteristic classes, classifying spaces, elementary cobordism.

Mr. Rudolph

MATHEMATICS 250aR. Riemann Surfaces

Mr. Van Moerbeke

MATHEMATICS 291. Fellowship of the Ring — Seminar in Commutative Algebra

Messrs. Buchsbaum and Eisenbud

MATHEMATICS 293. Topology Seminar

Messrs. Brown and J. Levine

***MATHEMATICS 294. Seminar in the Geometry of Singularities**

***MATHEMATICS 295. Algebraic Geometry Seminar**

MATHEMATICS 296. Seminar in Artin Rings and Representation Theory

Mr. Auslander

MATHEMATICS 297. Number Theory Seminar

Mr. Monsky

MATHEMATICS 299a and b. Readings in Mathematics

Staff

***MATHEMATICS 301a and b. Algebra III**

***MATHEMATICS 302a. Algebraic Geometry**

MATHEMATICS 302b. Arithmetic Algebraic Geometry

Mr. Matsusaka

***MATHEMATICS 311a. Topics in Analysis**

MATHEMATICS 321a. Algebraic Topology III

Mr. Nicas

MATHEMATICS 321b. Algebraic Topology III

To be announced

***MATHEMATICS 324b. Lie Groups**

MATHEMATICS 326. Research Seminar

Mr. Eisenbud

***MATHEMATICS 335a. Non-Commutative Algebra**

***MATHEMATICS 335b. Non-Commutative Algebra**

MATHEMATICS 399a and b. Readings in Mathematics

Staff

MATHEMATICS 401-412. Research

Independent research for the Ph.D. degree.

401. *Mr. Auslander*

406. *Mr. Matsusaka*

410. *Mr. Eisenbud*

402. *Mr. Brown*

407. *Mr. Monsky*

411. *Mr. Mayer*

403. *Mr. Buchsbaum*

408. *Mr. Palais*

412. *Mr. Van Moerbeke*

404. *Mr. H. Levine*

409. *Mr. Schwarz*

413. *Mr. Igusa*

405. *Mr. J. Levine*

MUSIC

Objectives

The graduate program in music, leading to the degrees of Master of Fine Arts and Doctor of Philosophy, is designed to provide a command of the craft of composition and an understanding of the nature, structural basis, and historical development of music.

The following general fields of study are offered in music:

1. *Composition.* This program, emphasizing composition and supported by studies in analysis, leads to the degrees of Master of Fine Arts and Doctor of Philosophy.
2. *Music History.* This program featuring studies in a variety of techniques including analysis applied to different repertoires and historical problems, leads to the degrees of Master of Fine Arts and Doctor of Philosophy.
3. Applicants in music theory are welcomed, although no program specifically confined to theory is offered. The course of study is individually determined, in consultation with the faculty, to comprise courses in theory, analysis, history of theory, and music history, offered under the above two headings.

Students must specialize in one of these areas, but composers are expected to undertake some work in music history and historians to acquire some competence in tonal writing.

Admission

Only a limited number of students will be accepted. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

Applicants for study in musical composition and theory are required to submit, in addition to a transcript of their undergraduate records, evidence of qualification in the form of examples of original work in musical composition and advanced work in musical theory. Applicants for admission in the history of music should submit examples of their prose writing on music as evidence of their ability to handle the language and specialized vocabulary. Undergraduate theses or term papers will be satisfactory. History applicants wishing to specialize in analysis should also submit examples of advanced work in musical theory. This work should be submitted together with the formal application for admission.

All applicants are expected to have some proficiency at the piano or an orchestral instrument. Information about this should be furnished when making formal application. A departmental written test in basic musicianship and analysis will be sent to all applicants; answers are to be submitted by mail on or before February 15.

Admission is granted for one academic year at a time. Students in residence must make formal application for readmission to the department on or before the final date specified in the Academic Calendar for filing "Application for Financial Aid." Readmission will be refused in cases where students have not demonstrated a capacity for acceptable graduate work.

Faculty

Associate Professor Allan R. Keiler, *Chair and Director of Graduate Studies*
Professor Caldwell Titcomb, *Co-Chair and Director of Undergraduate Studies*
Professor Martin Boykan
Visiting Professor Andrew Imbrie
Professor Robert L. Koff
Professor Donald Martino
Professor Alejandro Planchart

Professor Harold S. Shapero, *Director of Electronic Studios*

Associate Professor James D. Olesen

Assistant Professor Eric Chafe

Assistant Professor Peter B. Child

Assistant Professor David M. Hoose

Assistant Professor Edward C. Nowacki

Assistant Professor Conrad M. Pope, *Theory Coordinator*

Instructor Allen L. Anderson

Performing Artist-in-Residence Timothy C. Aarset

Performing Artist-in-Residence Rosalind D. Koff

Degree Requirements

Master of Fine Arts

Language Requirements.

Group A: French, German, Italian.

Group B: Spanish, Latin, Hebrew, Greek (and other languages at the discretion of the music faculty).

Candidates for the master's degree in Musical Composition and Theory must possess a reading knowledge of one language from Group A.

Candidates for the master's degree in History of Music must possess a reading knowledge of two languages from Group A.

Foreign language course credits will not in themselves constitute fulfillment of the language requirements for advanced degrees. All candidates must pass language examinations set or approved by the music faculty and offered periodically during the academic year. Students are urged to take these examinations at the earliest feasible date. In case of failure, an examination may be taken more than once.

Instrumental Proficiency. At least moderate proficiency at the piano is required of all candidates for advanced degrees.

Residence Requirements. Six full courses or the equivalent in half-courses at the graduate level, completed with distinction, and a thesis are required of all candidates.

The department normally allows credit for no more than one full course taken at another institution.

In general, the program of course work is completed in two academic years. It is suggested that students pursue no more than three full courses in any one year.

Examinations. Shortly after their arrival, new graduate students will be expected to take an examination in the standard literature of music. Where deficiency occurs, examinations will be repeated.

Before the end of their second year of study, candidates for the degree of Master of Fine Arts must demonstrate their competence in both theory and history by means of a written general examination in their major field, and either by an examination or by one of the following alternatives in their minor field:

For candidates in composition, the successful completion of Music 182a (or b) or 183a (or b), or of comparable courses taken elsewhere, will be accepted in lieu of a minor general examination in music history. The faculty reserves the right to evaluate the student's accomplishment in history courses not taken at Brandeis.

For candidates in music history, competence in theory can be demonstrated by the successful completion of at least one semester of Music 227, or by a written examination.

The following timetable is suggested for major general examinations: *For candidates in*

composition, the composition examination may be taken during the first year and repeated if necessary in the second; the analysis portion of the examination will normally be taken during the second year. Examinations may be repeated in the third year only in the case of a student not proceeding beyond the master's degree. *For candidates in music history*, major general examinations will normally be taken during the second year; they may be repeated in the third year at the discretion of the faculty.

Thesis. Candidates for the degree of Master of Fine Arts in Music are required to submit a thesis. For candidates in musical composition and theory, this will consist of a musical composition, its scope to be approved by the music faculty. For candidates in the history of music it will be an analytical or historical study on a topic acceptable to the music faculty. Candidates in the history of music may submit, in lieu of a separate thesis, revised copies of two seminar papers that have been certified by the seminar instructor and at least one other faculty member as demonstrating a high degree of competence in research and writing. Two copies of the thesis or composition must be submitted to the department chairman in final form no later than December 1 for a February degree or March 1 for a May degree.

Doctor of Philosophy

Admission to the doctoral program is normally granted at the end of the second year of residence, and is determined by the student's performance in course work and general examinations. For candidates in music history, acceptance may be deferred pending repetition of portions of the major examinations.

Residence Requirements. A minimum of eight full courses or the equivalent in half-courses at the graduate level, completed with distinction, are required of all candidates.

In general, the program of course work will be completed in three academic years.

Applicants who have done graduate work elsewhere may apply for transfer of credit for such work; a maximum of one year of residence may be granted.

Instrumental Proficiency. At least moderate proficiency at the piano is required of all candidates.

Language Requirements. Candidates for the doctoral degree in the history of music must possess a reading knowledge of all three languages in Group A. If appropriate to the student's program, the music faculty may accept a language in Group B in lieu of Italian. Candidates in composition and theory must possess a reading knowledge of two languages in Group A.

Examinations. Candidates for the Ph.D. degree have no additional written examination requirements in their major field beyond those for the M.F.A. In the minor field, doctoral-level examinations may, if desired, be replaced by the option of an additional semester of course work completed with distinction. For candidates in composition and theory, a semester of Music 200 or 299 is suggested; for candidates in history, an additional semester of Music 227.

After meeting their language, residence, and general examination requirements, candidates for the Ph.D. must pass a special oral qualifying examination.

Admission to Candidacy. Students will be admitted to candidacy for the Ph.D. degree upon successful completion of the written and oral qualifying examinations, fulfillment of the language requirements, and the approval of a dissertation topic.

Dissertation. Candidates for the degree of Doctor of Philosophy in Composition must submit an original musical composition and a thesis on a theoretical or analytical subject. Candidates for the degree of Doctor of Philosophy in History of Music must submit a dissertation on an historical or analytical subject. Two copies of the doctoral dissertation, as well as an abstract of the dissertation not to exceed six hundred words in length, should be submitted to the department or committee chairman no later than December 1 for a February degree and March

I for a May degree of the academic year in which the Ph.D. degree is to be conferred.

Written dissertations should demonstrate the competence of the candidate as an independent investigator, his or her critical ability, and effectiveness of expression. Upon completion of the dissertation, the candidate will be expected to defend it in an oral examination.

Courses of Instruction

Except in the rarest circumstances, graduate credit is not allowed for courses numbered below Music 165.

***MUSIC 168a. Orchestration**

***MUSIC 171a. History of Music and Drama Criticism**

MUSIC 180bR. Ethnomusicology

An introduction to the music of non-literate peoples; to folk music, including that of Afro-Americans; and to the music of non-Western high cultures, particularly India and Japan.

Mr. Titcomb

MUSIC 182a. Medieval and Renaissance Periods

Selected topics in the history of music from the medieval, renaissance and baroque periods.

Mr. Planchart

***MUSIC 184a. Topics After 1750**

***MUSIC 194b. Problems in Cultural Historiography**

MUSIC 195a. Electronic Music

Composition and recording of electronic music. Technical electronics as they apply to musical problems.

Mr. Shapero

MUSIC 197a. Tutorial in the Analysis of Tonal Music

Basic analytical problems of tonal music, approached through detailed study of a few representative works.

Mr. Keiler

***MUSIC 197b. Tutorial in the Analysis of Twentieth Century Music**

MUSIC COLLOQUIUM

Discussions of special topics led by the faculty and occasional guests. Some of the sessions will include performances of new works. Required of all graduate students. *Non-credit.*

Staff and Visiting Lecturers

MUSIC 200a. Proseminar in Musicology

A survey of the principal subject matters, problems, and techniques comprising the discipline of musicology.

Mr. Nowacki

MUSIC 200b. Proseminar in Musicology

See Music 200a.

Mr. Chafe

***MUSIC 203. Advanced Musical Analysis**

***MUSIC 204b. Proseminar in Style and Analysis**

MUSIC 221a. Seminar in the Music of the Middle Ages

Selected topics in fifteenth century vocal repertory.

Mr. Planchart

MUSIC 221b. Seminar in the Music of the Middle Ages

Topics in the history of chant repertory and sixteenth century motet repertory.

Mr. Nowacki

MUSIC 222b. Seminar in the Music of the Renaissance

Studies in the history of music during the fifteenth and sixteenth centuries. Typical projects include: manuscript production at Ferrara in the sixteenth century, authenticity and chronology in the motets of Josquin des Prez.

Mr. Planchart

MUSIC 223a. Seminar in Baroque Music

Studies in the historical developments in music of the seventeenth and eighteenth centuries. Typical projects will include: the cantatas of J.S. Bach; seventeenth century keyboard music; history of cantata and oratorio in the seventeenth century; sonata, suite, concerto; Baroque music. *Mr. Chafe*

MUSIC 224aR. Seminar in Pre-Classical and Classical Music

Study of historical problems in the music of the middle and late eighteenth century. *Mr. Keiler*

***MUSIC 225a. Seminar in Romantic Music**

***MUSIC 226a. History and Literature of Western Music Theory: Baroque to 1850**

***MUSIC 226b. History and Literature of Western Music Theory: 1850 to the Present**

MUSIC 227a. Proseminar in Theory and Composition

Technical projects in theory and composition; tonal forms and contrapuntal techniques. *Mr. Pope*

MUSIC 227b. Proseminar in Theory and Composition

Section 1: Mr. Anderson
Section 2: Mr. Shapero

***MUSIC 228a. Seminar in Twentieth Century Techniques**

MUSIC 233a. Topics in Analysis *Mr. Imbrie*

MUSIC 233b. Topics in Analysis *Mr. Pope*

***MUSIC 244b. Berlioz**

***MUSIC 246a. Stravinsky**

***MUSIC 265a. Advanced Orchestration**

MUSIC 270a. Seminar in Serial Music

Detailed analysis of scores by Schoenberg, Webern, Boulez, Babbitt; methods of serial organization; relationship between serial procedures and general compositional problems such as phrase articulation and "harmonic movement." *Mr. Boykan*

MUSIC 292a. Seminar in Composition

Group meetings and individual conferences. Opportunities for the performance of student works will be provided. *Section 1: Mr. Shapero*
Section 2: Mr. Imbrie

MUSIC 292b. Seminar in Composition

Section 1: Mr. Shapero
Section 2: Mr. Boykan

MUSIC 299a and b. Individual Research and Advanced Work

Staff

MUSIC 401-410. Dissertation Research

Required of all doctoral candidates

- | | |
|---------------------------|-------------------------|
| 401. <i>Mr. Boykan</i> | 407. <i>Mr. Keiler</i> |
| 402. <i>Mr. Planchart</i> | 408. <i>Mr. Chafe</i> |
| 403. <i>Mr. Shapero</i> | 409. <i>Mr. Pope</i> |
| 404. <i>Mr. Martino</i> | 410. <i>Mr. Nowacki</i> |
| 405. <i>Mr. Titcomb</i> | |

Electronic Music Studios

Two studios with facilities for the composition of electronic music are available to qualified student composers. *Director: Mr. Shapero*

THE PHILIP W. LOWN SCHOOL OF NEAR EASTERN AND JUDAIC STUDIES

The Lown School is the center for all programs of teaching and research in the areas of Judaic Studies, Ancient Near Eastern Studies and Islamic and Modern Middle Eastern Studies. The School includes the Department of Near Eastern and Judaic Studies, the Hornstein Program for Jewish Communal Service and the Center for Modern Jewish Studies. The Department of Near Eastern and Judaic Studies offers academic programs in the major areas of its concern. The Hornstein Program is a professional training program leading to the Master of Arts degree in Jewish Communal Service. It makes full use of academic resources of the Department of Near Eastern and Judaic Studies and other departments in the university.

The Center for Modern Jewish Studies conducts, and serves to stimulate, research and teaching in Contemporary Jewish Studies, primarily in the field of American Jewish Studies.

NEAR EASTERN AND JUDAIC STUDIES

Objectives

The graduate program in Near Eastern and Judaic Studies, leading to the Master of Arts and Doctor of Philosophy degrees, is designed to train scholars and teachers in the various cultures of the Near East and of classical and modern Judaic civilization, and to advance scholarly research in these areas. This work is done mainly through study of the relevant languages and literatures and the interpretation of historical sources.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this department.

Faculty

Associate Professor Leon A. Jick, *Chair*: Contemporary Jewish history.

Professor Marvin Fox, *Director of the Lown School*: Jewish philosophy. Rabbinic thought. Modern Jewish thought.

Professor Naftali C. Brandwein: Modern Hebrew literature.

Professor Alfred L. Ivry: Jewish philosophy. Islamic philosophy.

Visiting Professor Steven Katz: Modern Jewish philosophy.

Visiting Professor Israel Levin: Medieval Hebrew literature.

Professor Jehuda Reinharz: Modern Jewish history. History of Zionism.

Professor Nahum M. Sarna: Biblical studies. Dead Sea Scrolls. Ugaritic. Northwest Semitic inscriptions.

Professor Marshall Sklare, *Director of the Center for Modern Jewish Studies*: Sociology of the Jewish community.

Professor Dwight W. Young: Ancient Near East civilization. Assyriology. Ugaritic. Biblical studies.

Visiting Associate Professor Tzvi Abusch: Assyriology. Religions and cultures of the Ancient Near East.

Associate Professor Michael Fishbane: Biblical studies. Dead Sea Scrolls.

Adjunct Associate Professor Ariella D. Goldberg, *Director of Hebrew Language Program*: Hebrew.

Associate Professor Avigdor Levy, *Director of Islamic and Middle Eastern Studies*: Middle Eastern studies.

Associate Professor Benjamin C. I. Ravid, *Director of Graduate Studies*: Jewish history.

Associate Professor Bernard Reisman: Jewish communal service.

Assistant Professor Aaron Katchen: Second Commonwealth and Hellenistic Judaism. Early modern Jewish history.

Assistant Professor Reuven Kimelman: Talmud and Rabbinic literature.

Lecturer Charles Cutter: Judaic bibliography.

Lecturer Miroslav Krek: Islamic bibliography.

Adjunct Lecturer Michael D. Swirsky: Hebrew.

Program of Study

Among the main fields in the area of Near Eastern and Judaic Studies in which courses are being given in the Graduate School are:

Ancient Near East Studies.

Biblical Studies.

Jewish History.

Hebrew Literature.

Jewish Thought.

Jewish Philosophy, medieval and modern.

Islamic Philosophy.

Ottoman History.

The Modern Middle East.

Contemporary Jewish Studies.

The department regularly offers additional courses in related fields.

Degree Requirements

Master of Arts

Residence Requirements. Two years of full-time residence will be required at the normal course rate of seven courses each academic year.

Language Requirements. Candidates will be required to establish competence in Hebrew or Arabic as well as in one European language, normally either French or German.

Comprehensive Examination. All candidates for the Master of Arts degree are required to pass a comprehensive examination.

Thesis. In the field of The Modern Middle East, students may be required to write a thesis which must be submitted no later than April 1 of the year in which the degree is to be conferred. A thesis is not required in other fields in the Department of Near Eastern and Judaic Studies.

Doctor of Philosophy

Residence Requirements. Three years of full-time residence will be required at the normal rate of seven semester-courses each academic year. Students who enter with graduate credit from other recognized institutions may apply for transfer credit. By rule of the Graduate School, a maximum of one year of credit may be accepted toward the residence requirement on the recommendation of the chairman of the department.

Language Requirements. Candidates will be required to establish competence in Hebrew or Arabic as well as in two European languages, normally French or German. Additional languages may be required as necessary for research in each individual candidate's field.

Comprehensive Examinations. All candidates for the Ph.D degree are required to pass three comprehensive examinations. The first examination in each field will be a written comprehensive qualifying examination covering the field as a whole. The second and third examinations will usually be oral and will cover more specialized subjects within the candidate's field.

Admission to Candidacy. A student registered for studies leading to the Ph.D. degree becomes a candidate for that degree upon fulfillment of the residence requirements, when he/she has passed the comprehensive examinations, fulfilled the language requirements, and has had a dissertation proposal approved by the department.

Dissertation and Defense. The dissertation must demonstrate the candidate's thorough knowledge of the field and competence in independent research, and must constitute an original contribution to knowledge. Two copies of the dissertation, one of which must be the original typescript, are to be deposited in the office of the department chairman no later than April 1 of the year in which the candidate expects to earn the degree. The student must successfully defend the dissertation at a final oral examination.

Courses of Instruction

***NEJS 100a. Jewish Civilization**

***NEJS 100b. Jewish Civilization II**

NEJS 101. Introductory Literary Arabic

A first course in literary Arabic covering the essentials of grammar, reading, pronunciation, translation and composition. *To be announced*

NEJS 102a. Intermediate Literary Arabic

Study of advanced grammatical and syntactical forms. Reading in classical and modern texts. Drills in pronunciation and composition.

Prerequisite: NEJS 101 or its equivalent.

To be announced

NEJS 102b. Intermediate Literary Arabic

A continuation of NEJS 102a.

Mr. Levy

***NEJS 103a. Islam: Civilization and Institutions**

***NEJS 103b. Faith and Reason in Islam**

NEJS 104bR. Aramaic Dialectology

Topic for 1982-83 is Syriac. A grammatical study of one of the ancient dialects accompanied by the reading of texts. The dialect treated will vary from year to year, and the course may be repeated for credit.

Mr. Young

***NEJS 106. Elementary Ugaritic**

***NEJS 107a. Temple, Myth and Ritual in Ancient Egypt**

***NEJS 107b. Temple, Myth and Ritual in Ancient Mesopotamia**

NEJS 108b. Comparative Grammar of Semitic Languages

An introduction to the internal relationships within the Semitic family and the distinctive linguistic features of its components. Grammatical and lexical similarities to Egyptian and other related languages of North Africa will be studied. Both the earliest documented ancient languages and contemporary spoken dialects will be considered.

Mr. Young

***NEJS 109a. The Patriarchal Narratives in the Light of Ancient Near East Thought**

***NEJS 110b. Problems in Biblical History**

NEJS 111b. Genesis

Selected portions of the book will be read in Hebrew; textual, exegetical and literary study. Particular attention to the meaning and background of the primeval history.

Mr. Abusch

***NEJS 112a. Biblical Hebrew**

***NEJS 112b. The Book of Isaiah**

***NEJS 113a. Targum**

***NEJS 113b. The Book of Exodus**

***NEJS 114a. The Book of Amos**

***NEJS 114b. The Art of the Biblical Narrative**

***NEJS 115a. Book of Deuteronomy**

- *NEJS 116a. Introduction to Jewish Biblical Theology**
- *NEJS 116b. The Problem of Evil in Jewish Philosophy**
- *NEJS 117a. Job and the Problem of Evil**
- *NEJS 117b. Dead Sea Scrolls**
- *NEJS 118a. The Modern Study of Biblical Literature**
- *NEJS 118b. Book of Psalms**
- *NEJS 119aR. The Book of Ezekiel**
- *NEJS 119b. The Minor Prophets: Nahum, Habakkak, Zephaniah**
- NEJS 120b. Intermediate Talmud**

A more intensive study of selected portions of Treatise Sanhedrin not dealt with in NEJS 53a. Greater emphasis will be placed on the understanding of the classical commentaries. Students will be expected to develop the ability to work through a section of the text on their own. The analysis will deal with the issue of voluntary and compulsory arbitration, and the binding nature of gambling agreements.

Prerequisite: Hebrew 13.

Mr. Kimelman

NEJS 123b. Classical Biblical Commentaries

An intensive study of the French and Spanish schools of Jewish commentators on selected books of the Bible.

Mr. Fox

***NEJS 124aR. Modern Jewish-Christian Religious Thought**

***NEJS 124bR. Introduction to Jewish Mysticism**

***NEJS 125a. Midrashic Literature: Mekhilta d'Rabbi Yishmael**

***NEJS 125b. Midrashic Literature: Sifre Deuteronomy**

NEJS 126b. Agadic Literature: Avot DeRabbi Natan

A study of the "talmudic" commentary to Mishnah Avot which alone of the Mishnaic tractates deals exclusively with agadah. The class will focus primarily on literary and historical questions.

Mr. Kimelman

***NEJS 127a. Hellenistic Jewish Literature**

***NEJS 127b. The Jewish Liturgy**

NEJS 128a. Jews and Greeks

The meeting and accommodation between Judaism and Hellenism in the Land of Israel and in the Diaspora after the conquest of the Persian Empire by Alexander the Great in the late fourth century, B.C.E. Political, social and cultural history: the rise and fall of the Maccabees and early Jewish sects; the origins of Rabbinic Judaism.

Mr. Katchen

NEJS 128b. Jews and Romans

The history of the Jews under Roman rule from Herod to the rise of Islam (37 B.C.E. - 640 C.E.). Personalities (Hillel, Akiva, Philo, Josephus) and institutions (synagogue, Sanhedrin, Patriarchate). Jesus and the origins and separation of Christianity. The Jewish Wars, Masada, the revolt of Bar Kokhva, Jews in Rome, Alexandria, Cyrene and Sassanian Babylonia.

Mr. Katchen

***NEJS 129a. Philo Judaeus of Alexandria**

***NEJS 129b. Alexandria: The City and the Idea**

***NEJS 130a. Images of Moses: Ancient and Modern**

***NEJS 131aR. History of Jewish Philosophy: From Antiquity to the Twelfth Century**

***NEJS 132b. Philosophy of the Kalam**

***NEJS 135a. Neoplatonic Elements in Islamic and Jewish Philosophy**

NEJS 135bR. Aristotelian Elements in Islamic and Jewish Philosophy

Medieval Aristotelianism is faithful to Aristotle, but in its fashion. That fashion is decisive in Islamic and medieval Jewish philosophy. It will be explored by first ascertaining Aristotle's views in the areas of physics, metaphysics and ethics; and then by tracing expressions of these ideas in English translations of writings of Alfarabi, Avicenna, Abraham ibn Daud and Maimonides.

Mr. Ivry

NEJS 137a. Three Major Themes in Modern Hebrew Literature

Following a brief survey of the literature from the Hebrew Enlightenment to the Hebrew Renaissance, we will make an in-depth textual study of selected prose and poetry from the Hebrew Renaissance to today with special emphasis on the following selected themes: Biblical images and motifs, the Holocaust, and national redemption. Principal writers are Bialik, Shlonsky, Gilboa, Greenberg, Goldberg and Hazaz.

Mr. Brandwein

NEJS 138aR. Modern Hebrew Literature

An analytical study of the development of ideas, motifs and structure of modern Hebrew prose and poetry. The course will be based mainly on the works of H. Hazaz, S. Yizhar, M. Shamir, A. Oz, A.B. Yehoshua in prose and A.B. Yitzak, Rachel, N. Alterman, Y. Bat-Miriam, L. Goldberg in poetry. Special emphasis will be given to parallels in European literature. The main focus will be on the literature of the period from the establishment of the State of Israel to the present.

Mr. Levin

***NEJS 138b. Modern Hebrew Literature**

***NEJS 139a. Major Trends in Modern Hebrew Literature**

***NEJS 139b. Modern Hebrew Literature**

***NEJS 140a. The Jews in Europe to 1492**

***NEJS 140b. From Medieval to Modern: The Jews in Europe from 1492 to 1815**

***NEJS 141a. Jewish Historiography**

NEJS 141b. Jews, Catholics and Protestants in Western Europe, from the Reformation to the Present

A study of the political, legal, social and economic status of Catholics, Protestants and Jews in early and modern Europe, with emphasis on the status of minorities and their struggle for equality in the transition from the medieval *respublica Christiana* to the modern secular nation-state.

Mr. Ravid

***NEJS 142b. Economic History of the Jews to the Emancipation**

***NEJS 144a. Jewish Communities in the Muslim Near East in the 19th and 20th Centuries**

***NEJS 144b. Nationalism in the Middle East**

***NEJS 145b. The Near East in the Twentieth Century**

NEJS 147aR. History of the Middle East and the Ottoman Empire, 1450-1914

A historical survey of the Middle East from the establishment of the Ottoman empire as the area's predominant power to World War I. Topics include Ottoman institutions, their transformation and impact on Middle Eastern society; the Ottoman empire as a world power; Ottoman decline and European imperialism; nineteenth century reform and westernization.

Mr. Levy

***NEJS 147b. The Arab-Israeli Conflict**

NEJS 149b. Islamic Bibliography

The purpose of this course is to familiarize the student with the history of oral and written communications in Islam and Middle East. Origins and development of printing are discussed. Special emphasis is placed on bibliographic literature in Western languages of Arabic, Turkish and Persian manuscripts and printed works. There are no prerequisites,

although a workable knowledge of European languages and languages of the area is desirable. *Mr. Krek*

***NEJS 150a. Foundations of Zionist Thought**

***NEJS 150b. The Great Powers and the Middle East Since 1798**

***NEJS 151a. Introduction to Islamic Philosophy**

***NEJS 152b. A History of Anti-Semitism**

NEJS 153b. Sephardic Jewry, the Marranos, and the Inquisition

From the mass conversion of Jews to Christianity in 1391 to the establishment of the Spanish Inquisition in 1478, and beyond into the sixteenth and seventeenth centuries, the role and position of Spanish and Portuguese Jewry in their own and in Iberian and world history underwent profound changes. This course examines the social and intellectual history of professing Sephardic Jewry at home and abroad, of believing New Christians, and of the secret Jews known as Marranos, many of whom later reemerged as Jews in such centers as Venice, Amsterdam and Constantinople. *Mr. Ketchen*

***NEJS 154a. History of the Hebrew Language**

***NEJS 156b. Man and the Gods**

***NEJS 157a. Israeli Society**

NEJS 158bR. Biblical Prophecy: Book of Jeremiah

A study of the Hebrew text of the book of Jeremiah with emphasis on the role of prophecy and the literary forms and theological issues with which the prophet dealt. *Mr. Fishbane*

***NEJS 160a. The Emergence of the American Jewish Pattern, 1654-1967**

NEJS 161a. American Jewish Life

A survey of American contemporary Jewish life with special emphasis on the diverse forms of Jewish identification found in American Jewry. Topics include Reform, Conservative and Orthodox Judaism; Jewish family life including intermarriage; and the relationship of Jews to the general society and to other ethnic groups. *Mr. Sklare*

***NEJS 162a. Jewish Identity in the Modern World**

***NEJS 163a. The Sociology of the American Jew**

***NEJS 164b. The Sociology of the American Jewish Community**

NEJS 166a. Modern Jewish History to 1880

Major themes will include: Enlightenment and Haskalah in eastern and western Europe, Hasidism, Emancipation and the argument for and against Emancipation, Assimilation and the problem of the marginal Jew, the Science of Judaism, the development of denominationalism in Judaism. *Mr. Reinhartz*

NEJS 166b. Modern Jewish History 1880-1948

Major themes will include: integration and assimilation, migration, nationalism, Zionism, non-Zionism, Diaspora nationalism, western and eastern Jewry in the period between the World Wars, the Holocaust and the establishment of the State of Israel. *Mr. Reinhartz*

***NEJS 168b. History of the Jews in the Soviet Union**

NEJS 169aR. The Destruction of European Jewry

The function of anti-Semitism in the comparative history and politics of Nazism; the Holocaust organization and the victims' responses; allied policies and Western reactions; post-war punishment and reparations. Interdisciplinary approaches to historical sociology and legal philosophy will be applied. *Mr. Jick*

***NEJS 170b. Jewish Life and Institutions in Eastern Europe, 1918-1939**

***NEJS 171b. Trends and Values in Yiddish Literature**

***NEJS 173b. Seminar in Yiddish Literature**

NEJS 174b. *Pirkei Avot — The Sayings of the Fathers: In Its Historical Setting*

This rabbinic text will be subjected to an historical analysis based upon the intellectual situation in Palestine in the early centuries of the Common Era. The classical commentaries plus modern scholars such as Albeck, Dinur, Finkelstein, Goldin, Saldarini, Taylor *et al* will be consulted.

Prerequisite: Hebrew 13 or equivalent.

Mr. Kimelman

***NEJS 175a. History of Zionism**

***NEJS 176a. Judaism and Christianity in the First Centuries**

NEJS 182a. Introduction to Jewish Bibliography

The aim of the course is to acquaint students in the various fields of Judaic studies with the general bibliographic tools and the bibliographies in the major sub-fields. This course will concentrate on general Judaica/Hebraica bibliographies and on subject bibliographies in such fields as Jewish history, Jewish philosophy, Hebrew language and literature, anti-Semitism, Holocaust studies, etc.

Mr. Cutter

NEJS 182b. Introduction to Jewish Bibliography

See NEJS 182a.

Mr. Cutter

***NEJS 187b. Biblical Images, Motifs and Ideas in Modern Jewish Poetry**

NEJS 201a. The Syntax of Pre-Hellenistic Literary Hebrew

A diachronic investigation of the morpho-syntactic system preserved in texts of the Bible. Grammatical rules will be derived from the elements of sentences rather than intuitive translation and philological interpretation.

Mr. Young

***NEJS 206. Seminar in Advanced Akkadian Literary Texts: Myths, Epics, Hymns**

NEJS 207a. Akkadian Religious Texts

Close reading of prayers and incantations; other genre may also be studied. Exposition of linguistic, textual and literary form of S.B. compositions.

Mr. Abusch

***NEJS 207b. Akkadian Magical and Medical Texts**

***NEJS 208aR. Mantic, Magical and Oracular Traditions in Ancient Israel: Traits and Survivals**

***NEJS 210a. Seminar on the Institutional Development of the American Jewish Community**

***NEJS 210b. Seminar on Strategies of Jewish Continuity in America: Options and Alternatives**

***NEJS 211b. Topics in American Jewish History**

NEJS 215b. Topics in American Jewish Communal Organization

An examination of the structure of the American Jewish community with particular emphasis on gaining an understanding of the intricacies of the variegated network of local and national Jewish organizations. Emphasis is placed on the assumptions made by different agencies and institutions in pursuing their objectives. The relationship between the formal and the informal Jewish community is explored. The historical roots of American Jewish institutions are examined.

Mr. Sklare

NEJS 219b. Sumerian Historical Inscriptions

Reading of inscriptions of the UR III and Isin-Larsa periods; discussion of grammar, lexicon and writing of Sumerian.

Mr. Abusch

***NEJS 223b. Readings in the Dead Sea Scrolls**

- *NEJS 224bR. The History of the Biblical Canon, Text and Ancient Versions
- *NEJS 225aR. Seminar in Phoenician and Aramaic Inscriptions *Mr. Fishbane*
- *NEJS 225b. North-West Semitic Inscriptions
- *NEJS 226aR. Topics in Biblical Religion
- NEJS 227a. Seminar in Book of Chronicles *Mr. Fishbane*
- *NEJS 228b. Seminar on the Greek Versions of the Bible
- *NEJS 229. Introduction to Classical Ethiopic
- *NEJS 230a. Seminar in Medieval Jewish Philosophy
- *NEJS 230b. Seminar in Medieval Jewish Philosophy
- *NEJS 231b. Seminar in Medieval Islamic Philosophy
- *NEJS 232a. Seminar in Modern Jewish Philosophy
- *NEJS 233a. Seminar in Islamic Philosophy
- *NEJS 234a. Seminar in Late Medieval Jewish Philosophy
- NEJS 234b. Seminar in Modern Jewish Philosophy *Mr. Katz*
- *NEJS 236a. Theories of Prophecy in Medieval Jewish Philosophy
- *NEJS 236b. "Articles of Faith" in Medieval Jewish Philosophy
- NEJS 237a. Medieval Hebrew Poetry *Mr. Levin*
- NEJS 238a. Major Trends in Modern Hebrew Literature *Mr. Brandwein*
- *NEJS 254a. The Structure of Jewish History
- *NEJS 254b. The Problem of Modern Anti-Semitism
- *NEJS 256a. Seminar on the Dynamic Structure of Israeli Society
- *NEJS 256b. Seminar on the Dynamic Structure of Israeli Society
- *NEJS 258a. Seminar on the Jews of Modern France
- *NEJS 258b. Seminar on Modern Jewish History and Historiography
- NEJS 259a. Seminar on Zionism *Mr. Reinhartz*
- NEJS 259b. Seminar on Zionism *Mr. Reinhartz*
- NEJS 260a. Seminar on the Philosophical Foundations of Jewish Ethics: Ancient and Medieval *Mr. Fox*
- NEJS 260b. Seminar on the Philosophical Foundations of Jewish Ethics: Modern *Mr. Fox*
- *NEJS 262a. Problems in the Sociology of the American Jew
- *NEJS 266a. The Rise of Denominations in Modern Judaism
- *NEJS 272a. The Jews of Venice to 1797
- NEJS 272bR. History of the Jews in Venice *Mr. Ravid*
- *NEJS 273a. Jewish Survival in Medieval Europe
- NEJS 287a. American Modernity and Jewish Identity *Mr. Cohen*
- See JCS 287a.
- The following courses, offered in the Department of Classical and Oriental Studies, are of special interest to NEJS students studying in the fields of Ancient Near East, Semitics, and Biblical Studies. Please consult CLORS for descriptions.
- AKKADIAN 101. Elementary Akkadian *Ms. Morrison*
- AKKADIAN 103a. Advanced Akkadian II: Second Millennium Texts *Ms. Morrison*
- EGYPTIAN 101. Elementary Egyptian *Mr. Zabkar*

CLORS 100. Archaeology of the Ancient Near East and Aegean	<i>Mr. Todd</i>
CLORS 111. Archaeology of Syria-Palestine	<i>Mr. Todd</i>
CLORS 145bR. From Alexander the Great to Cleopatra VII	<i>Mr. Zabkar</i>
CLORS 160a. Ancient Egyptian Religion	<i>Mr. Zabkar</i>
CLORS 165aR. Introduction to the History and Civilization of the Ancient Near East	<i>Ms. Morrison</i>

NEJS 318-340. Reading Courses

Special tutorials for advanced graduate students.

318a and b. Readings in Arabic Literature	<i>Mr. Levy</i>
319a and b. Readings in Judaeo-Arabic Literature	<i>Mr. Ivry</i>
320a and b. Readings in Islamic Philosophy	<i>Mr. Ivry</i>
321a and b. Readings in Medieval Jewish Philosophy	<i>Mr. Fox</i>
322a and b. Readings in Modern Jewish Philosophy	<i>Mr. Fox</i>
323a and b. Readings in Jewish Thought	<i>Mr. Fox</i>
324a and b. Readings in Hebrew Literature	<i>Mr. Brandwein</i>
325a and b. Readings in Biblical Texts	<i>Mr. Sarna</i>
326a and b. Readings in Biblical Literature	<i>Mr. Fishbane</i>
327a and b. Readings in Ancient Near Eastern Civilizations	<i>Mr. Young</i>
328a and b. Readings in Ancient Near Eastern Languages	<i>Mr. Young</i>
330a and b. Readings in the Sociology of the Jewish Community	<i>Mr. Sklare</i>
331a and b. Readings in Yiddish Literature	<i>Mr. Szulkin</i>
332a and b. Readings in American Jewish History	<i>Mr. Jick</i>
333a and b. Readings in the History of the Jews in Europe to 1800	<i>Mr. Ravid</i>
334a and b. Readings in Modern Jewish History	<i>Mr. Reinharz</i>
335a and b. Readings in East European Jewish History	<i>Staff</i>
337a and b. Readings in Talmudic and Midrashic Literature	<i>Mr. Kimelman</i>
338a and b. Readings in Second Commonwealth and Hellenistic Judaism	<i>Mr. Katchen</i>
339a and b. Readings in Ottoman History and Civilization	<i>Mr. Levy</i>
340a and b. Readings in Modern Middle Eastern History	<i>Mr. Levy</i>

NEJS 401-411. Dissertation Colloquium

Independent research for the Ph.D. degree.

401. <i>Mr. Brandwein</i>	405. <i>Mr. Sarna</i>	409. <i>Mr. Fishbane</i>
402. <i>Mr. Fox</i>	406. <i>Mr. Sklare</i>	410. <i>Mr. Ravid</i>
403. <i>Mr. Ivry</i>	407. <i>Mr. Young</i>	411. <i>Mr. Levy</i>
404. <i>Mr. Reinharz</i>	408. <i>Mr. Jick</i>	

THE HORNSTEIN PROGRAM IN JEWISH COMMUNAL SERVICE

Objectives

The two-year program in Jewish Communal Service, leading to the Master of Arts degree, integrates Jewish studies and professional training, preparing students for positions in a variety of settings in the Jewish community, including federations, community centers, Hillel foundations, schools and other communal organizations.

A special one-year master's program is offered for students with graduate degrees in social work or Jewish studies. In addition, part-time study is permitted, but students must complete the program in no more than four years.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the Hornstein Program in Jewish Communal Service. In addition, applicants are expected to submit results of either the Graduate Record Examination or the Miller Analogies Test, a statement which describes the applicant's Jewish training and background and future plans, and a sample of written material. Applicants are expected to arrange for a personal interview.

Faculty

Associate Professor Bernard Reisman, *Director*: American Jewish communal studies.

Professor Marvin Fox: Jewish philosophy. Rabbinic thought. Modern Jewish thought.

Professor Arnold Gurin: Social welfare planning and policy.

Visiting Professor Joseph Lukinsky: Jewish education.

Professor Marshall Sklare: Sociology of the Jewish community.

Visiting Associate Professor Haim Avni: Contemporary Jewish studies.

Visiting Associate Professor Steven M. Cohen: Modern Jewish studies.

Associate Professor Leon A. Jick: American Jewish history.

Assistant Professor Jonathan S. Woocher: Contemporary Judaism. Jewish identity.

Lecturer Joshua Elkin: Jewish education.

Lecturer Mildred Guberman: Field work. Jewish communal service.

Lecturer Daniel Margolis: Jewish education.

Lecturer Susan Shevitz: Jewish education.

Lecturer Bennett Solomon: Jewish education.

See the Department of Near Eastern and Judaic Studies and the Heller School catalog for other faculty and course offerings.

Degree Requirements

Master of Arts

Students in the Jewish Communal Service program may concentrate in one of the following three areas:

1. Group Work and Community Organization.
2. Management.
3. Jewish Education.

Program of Study. Students are expected to complete a minimum of 14 courses, including study in the following areas: professional studies, contemporary Jewish studies and classical Jewish studies. Students may take courses at other Boston area graduate schools (Boston University and Boston College).

During intersession between the first and second terms of each year, students are expected to participate in 1) the *Betty Starr Colloquium on National Jewish Communal Organizations*, a two-day field trip for first-year students to visit national offices and meet with the staffs of major Jewish communal organizations in New York City, in order to examine their activities and roles in the American Jewish communal system; 2) the *Sumner N. Milender Seminar in Jewish Communal Leadership*, led by a prominent leader in Jewish communal service for several days of discussion and workshops on campus on aspects of Jewish communal leadership; and 3) *Management and Social Work Modules*, one week mini-courses dealing with specific practical skills and issues on an intensive basis. These are offered jointly by the Management of Human Services program of the Florence Heller School and other area schools of social work. All students are required to enroll for at least one module each year.

Residence Requirement. The residence requirement for this program is two years of full-time study or the equivalent in part-time study.

Language Requirement. Fluency in Hebrew is required at a level comparable to two years of college training. Students not meeting this requirement upon entrance are required to enroll in courses in Hebrew language — *not for credit*.

Summer Study in Israel. The *Joseph and Esther Foster Seminar in Israel on Contemporary Jewish Life* is sponsored in cooperation with the Center for Jewish Education in the Diaspora of The Hebrew University and is required of all students at the completion of their first year of study. The 4½-week program, held during May and June, is a combination of classes and field visits designed to provide an in-depth analysis of Israel. Costs for the Israel Seminar are partially subsidized by scholarships provided by the Joseph and Esther Foster Fund. Students are expected to pay the remainder of the cost.

Fieldwork/Internship. Students have two fieldwork experiences in a Boston area-Jewish educational or communal service organization. In the first year, fieldwork is 15 hours a week; in the second year, 20 hours. This schedule requires students to be in residence through the end of May and to plan for a shorter winter intersession than indicated in the University's Academic Calendar.

Substantive Paper. Students are required, during the second year, to submit a major substantive paper growing out of some phase of their fieldwork experience. The paper should analyze a practical issue in Jewish communal service in light of both the student's own experience and the relevant literature.

Courses of Instruction

JCS 53bR. Introduction to Talmud

See NEJS 53bR.

Mr. Kimelman

*JCS 119a. Introduction to Biblical Literature

JCS 119b. Curriculum/Philosophy of Jewish Education

Some of the theoretical constructs of curriculum building, design and types of curricula which exist will be studied and applied to the broad field of Jewish education. Students will be required to produce a practical curriculum as an exercise in application and synthesis.

To be announced

JCS 120b. Intermediate Talmud

See NEJS 120b.

Mr. Kimelman

*JCS 127b. The Jewish Liturgy

JCS 150aR. The Jewish Contribution to German Literature

See German 150aR.

Mr. Zohn

JCS 159a. Teaching/Learning in a Jewish Education Setting

This seminar will focus on the teacher/facilitator/instructor insofar as he/she relates to the processes of teaching and learning. The acts of teaching and learning will be analyzed and practical skills of matching teacher style with characteristics of class, subject matter, personality and environment will be applied to various Jewish educational formats.

To be announced

JCS 159b. Administration in Jewish Education

This seminar will concentrate on the settings in which Jewish education takes place. A variety of different models will be posited and studied, and the skills necessary for practical administration and consultation will be practiced.

To be announced

*JCS 160a. The Emergence of the American Jewish Pattern, 1654-1967

JCS 161a. American Jewish Life and Institutions

See NEJS 161a.

Mr. Sklare

***JCS 162b. Ideological Currents in Contemporary Jewish Life**

***JCS 163a. The Sociology of the American Jew**

***JCS 169aR. The Destruction of European Jewry**

JCS 199a. The Jews of Latin America: A Historical and Contemporary Survey

The course will include a survey of present life and institutions of the Jews in Latin American countries which have a predominantly indigenous population ("Indo-America") as compared with those in countries with predominantly an immigrant population ("Euro-America"). The historical background of these countries will be discussed in connection with their contemporary situation.

Mr. Avni

JCS 199b. World Jewry Today: The Contemporary Position of the Jewish People and Its Immediate Historical Background

The course will include the relationship between the host societies and Jewish communities in the "old world" and in the new diasporas; the process of Jewish immigration before and after the "Law of the Return," the relationship between diaspora Jewry and Israel before 1948 and since.

Mr. Avni

JCS 205a. Theory and Practice of Jewish Communal Service

An introduction to the field of Jewish communal service. This includes a history of Jewish communal services in this country, their relationship to Jewish traditions and to developments in the field of social welfare; the settings in which Jewish services are offered and the factors making for effective organizational performance.

Mr. Reisman

JCS 205b. Theory and Practice of Jewish Communal Service

The focus of the course is on developing a systematic approach to professional performance in Jewish communal organizations. This involves an analysis of contemporary societal developments which affect Jewish individuals and families. This analysis serves as the point of departure for assessing current programs and policies of Jewish communal agencies and for developing new programs to meet changing needs.

Mr. Reisman

JCS 206b. Principles of Informal Education and Small Groups in Jewish Communal Service

This course has two components: 1) principles of informal, experiential education as these are applicable in Jewish communal work and 2) principles of small group dynamics — leadership, group processes, individual dynamics and self-awareness of the participants as it relates to group leadership roles in Jewish communal life.

Mr. Reisman

JCS 207a. The History and Ideology of the Jewish Community

An examination of the principles and forms of Jewish communal organization from the Biblical period through the contemporary era. The course focuses on the ways in which the Jewish political tradition and its fundamental values have shaped communal structures, functions and leadership.

Mr. Woocher

JCS 208a. Contemporary Jewish Identity

An examination of the dynamics of Jewish identity: the changing historic and social forces which shape Jewish identity, resulting in a range of definitions of Jewishness in the contemporary era. Attention is addressed to the process by which current social institutions such as the family, Jewish education and Jewish communal programs seek to influence Jewish identity.

Mr. Woocher

***JCS 209aR. Issues in Jewish Communal Leadership and Policy**

***JCS 210a. Institutional Development of the American Jewish Community**

***JCS 210b. Jewish Literary Heritage**

***JCS 211b. Topics in American Jewish History**

JCS 212aR. Methods and Skills in Jewish Communal Research and Evaluation

An introduction to basic skills and methods employed in current research on Jewish communal life. Significant examples of recent research will be examined and students will undertake small-scale research projects. Emphasis will be placed on how research and a knowledge of research tools and methods can enhance professional functioning and communal programs.

Mr. Woocher

JCS 213b. The Jewish Tradition and Jewish Communal Service

An exploration of the role of traditional Jewish values and customs in shaping the perspectives and work of the Jewish communal professional. The focus will be on how Jewish concepts — the sanctity of life, human dignity, *tzedakah*, *tzibbur*, *kedushah* — can inform the ways in which communal workers think about and deal with critical issues affecting Jewish individuals, families and communities.

Mr. Woocher

JCS 215b. Topics in American Jewish Communal Organization

See NEJS 215b.

Mr. Sklare

JCS 216aR. Organization and Planning in the Jewish Community

This course will deal with the administration of organizations, inter-organizational planning, and the raising and allocation of funds in the American Jewish community. The purpose is to introduce second-year students in the Hornstein Program to practical methods and tools in these areas and ways of conceptualizing the process of administration and planning.

Mr. Gurin

JCS 218a. Supervision in a Jewish Educational Setting

A survey of the methods of observation and supervision, both theoretical and practical, will be balanced with practice in the skills of communication and supervision in order to diagnose, observe, prescribe and implement change. The focus of this seminar is on the supervisor insofar as he/she looks at the setting, the teacher and the learner.

To be announced

JCS 248c. Field Methods in Jewish Communal Service

Students are placed in selected Jewish communal organizations during the first year for two days a week of field practice. They receive individual supervision from an agency field supervisor, meet every other week with faculty for a group seminar and for periodic individual conferences.

Ms. Guberman

JCS 250. Field Methods in Jewish Communal Service and Jewish Education

Same as JCS 248c, except students are in field work for three days a week.

Ms. Guberman and Mr. Reisman

JCS 287a. American Modernity and Jewish Identity

See NEJS 287a.

Mr. Cohen

Seminar on Contemporary Jewish Issues

During the fall semester the seminar will meet every Wednesday from 11 a.m. to 1 p.m.

During the spring semester, the seminar will meet on alternate Wednesdays. *Non-credit.*

JCS-SS 350. Foster Seminar in Israel on Contemporary Jewish Issues

Offered in cooperation with the Center for Jewish Education in the Diaspora at The Hebrew University.

PHOTOBIOLOGY

See Photobiology (page 48).

PHYSICS

Objectives

The graduate program in physics is designed to equip students with a broad understanding of major fields of physics and to train them to carry out independent, original research. This objective is to be attained by formal course work and supervised research projects. As the number of students who are accepted is limited, a close contact between students and faculty is maintained, permitting close supervision and guidance of each student.

Advanced degrees will be granted upon evidence of the student's knowledge, understanding and proficiency in classical and modern physics. The satisfactory completion of advanced courses will constitute partial fulfillment of these requirements. Research upon which theses may be based, with residence at Brandeis, can be carried out in the following areas:

Theoretical Physics: Quantum theory of fields; elementary particle physics; general theory of relativity; quantum statistical mechanics; thermodynamics of irreversible processes; quantum theory of the solid state, critical phenomena and phase transitions.

Experimental Physics: High energy experimental physics; atomic and molecular physics; solid state physics; nuclear magnetic resonance; phase transition phenomena; liquid crystal physics; light scattering; positron physics; radio astronomy; biophysical structure analysis.

Admission

As a rule, only candidates for the Ph.D. degree will be accepted. The general requirements for admission to the Graduate School apply to candidates for admission to the graduate area in physics. Admission to advanced courses in physics will be granted following a conference with the student at entrance.

Faculty

Professor Howard J. Schnitzer, Chair: Elementary particle theory. Quantum theory of fields.

Professor Stephan Berko: Positron interactions in solids. Positronium physics.

Professor Donald L. D. Caspar (Rosenstiel Basic Medical Sciences Research Center): Structural molecular biology. X-ray crystallography.

Professor Jacques Cohen: Computer science. Programming language. Non-numerical algorithms.

Professor Stanley A. Deser: Quantum theory of fields. Elementary particles. Supergravity.

Professor Jack S. Goldstein: Astrophysics.

Professor Marcus T. Grisaru: Quantum field theory. Elementary particles. Supergravity.

Professor Eugene P. Gross: Quantum theory of multiparticle systems. Quantum theory of solids. Kinetic theory. Plasma physics.

Professor Peter Heller: Solid state experimental physics. Phase transitions. Spin systems.

Professor Lawrence E. Kirsch (Director, Feldberg Computer Center): High energy experimental physics.

Professor Hugh N. Pendleton : Mathematical physics. Supergravity.

Professor Alfred G. Redfield (Rosenstiel Basic Medical Sciences Research Center): Magnetic resonance. Biophysics.

Professor Silvan S. Schweber: Quantum theory of measurement. History of science.

- Associate Professor James R. Bensinger:** Experimental high energy physics.
- Associate Professor Karl F. Canter:** Experimental low energy positron physics in atomic and many-body systems.
- Associate Professor Max Chretien:** Computer science.
- Associate Professor Robert V. Lange:** Biophysics. Visual perception.
- Associate Professor Robert B. Meyer:** Liquid crystal physics.
- Associate Professor Lawrence M. Schwartz:** Theoretical solid state physics. Electronic structure of disordered systems.
- Associate Professor John F. C. Wardle:** Radio astronomy. Cosmology.
- Associate Professor Hermann F. Wellenstein:** Experimental atomic physics. Electronic impact spectroscopy.
- Assistant Professor Laurence F. Abbott:** Elementary particle theory. Quantum theory of fields.
- Assistant Professor Ellis S. Cohen:** Operating Systems. Programming languages. Programming environment.
- Assistant Professor Mitchell L. Model:** Artificial intelligence.
- Assistant Professor Takashi Odagaki:** Theoretical solid state physics.
- Assistant Professor Richard A. Poster:** Experimental elementary particle physics.
- Assistant Professor David H. Roberts:** Extragalactic astronomy.
- Adjunct Assistant Professor Naomi B. Schmidt:** Computer science.
- Assistant Professor Frank Sinclair:** Experimental solid state physics.
- Assistant Professor Leigh Sneddon:** Theoretical solid state physics.
- Assistant Professor James A. Storer:** Computer science.
- Assistant Professor Charles Y. Young:** Experimental condensed matter physics.

Degree Requirements

Master of Arts

Program of Study. The requirements for advanced degrees in the Department of Physics are as follows:

1. One year in residence as a full-time student.
2. Six semester courses of advanced work in physics. A thesis on an approved topic may be accepted in place of a semester course.
3. Satisfactory performance in the Qualifying Examination.

Doctor of Philosophy

1. Two years of residence as a full-time student.
2. Nine semester courses of advanced work in physics.
3. Outstanding performance on the qualifying examination.
4. Passing of an advanced examination in topics related to the student's thesis subject. This examination will normally be taken after preparatory studies in the prospective field of research.
5. Doctoral thesis and final oral examination.

Program of Study and Course Requirements. Normally, first-year graduate students will elect from the 100 series; second-year students from the 200 series. To obtain credit toward residence for a graduate course taken at Brandeis, a student must achieve a final grade of "A" or "B" in that course. A student who obtains a grade lower than "B" or an "Incomplete" in two or

more courses in any term will not be allowed to continue his or her studies beyond the end of that academic year. (A course from which students withdraw after midterm will be considered as "Incomplete.")

Students may obtain credit for advanced courses taken at another institution provided their level corresponds to the level of graduate courses at Brandeis and that an honor grade in these courses was obtained.

Residence Requirements. A student may obtain up to one year's residence credit toward the Ph.D. requirements for graduate studies taken at another institution. No transfer residence credit will be allowed toward fulfillment of the master's requirements.

Teaching. It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Language Requirement. There is no foreign language requirement for either the master's or the doctoral degrees.

Qualifying Examinations. In the first year, Quantum Mechanics (Physics 102) and Electromagnetic Theory (Physics 101) must be taken by all students unless they are exempted. All students, whether exempted or not, must take the final examinations in these courses (both fall and spring semesters), which also serve as the qualifying examination although the course itself is not required. An oral examination given at the end of the first year completes the qualification requirements.

Specialized courses also will form part of the qualifying examination. At least two graduate courses, with final examinations in the specialized courses listed below, must be taken during the first three semesters: (1) Statistical Physics, (2) Solid State Physics, (3) Biophysics, (4) Elementary Particles, (5) Astrophysics, (6) Experimental Physics (Physics 109), (7) General Relativity. Note, however, that not all of the above courses will necessarily be given each year.

One semester of Advanced Quantum Mechanics (Physics 202a) will be a required course for all students.

Advanced Examinations. Advanced examinations will be in topics partitioned in the several areas of research interests of faculty. Faculty members working in each general area will function as a committee for this purpose and will provide information about their work through informal discussions and seminars. The advanced examination requirement consists of a written paper and an oral examination. While no original research by the student is expected, it is hoped that a proposal for a possible thesis topic will emerge. It is generally expected that the candidates will take the advanced examination in the field they wish to pursue for their Ph.D. theses, although there may be exceptions.

Thesis Research. After passing the advanced examination, the student begins work with an adviser who guides his or her research program. The adviser should be a member of the Brandeis faculty but in special circumstances may be a physicist associated with another research institution. The graduate committee of the physics faculty will appoint a dissertation committee to supervise the student's research. The student's dissertation adviser will be the chair of the dissertation committee. The committee will recommend the student for admission to candidacy for the doctorate on recommendation of his or her adviser.

Dissertation and Final Oral Examination. The doctoral dissertation must represent a piece of research of a standard acceptable to the faculty committee appointed for each Ph.D. candidate. The final oral examination, or defense, is an examination in which the student will be asked questions pertaining to the dissertation research.

Courses of Instruction

*PHYSICS 100a. Advanced Classical Mechanics

PHYSICS 101a. Electromagnetic Theory I

Electrostatics, magnetostatics, boundary value problems.

Mr. Gross

PHYSICS 101b. Electromagnetic Theory II

Maxwell's equations. Quasi-stationary phenomena. Radiation.

Mr. Gross

PHYSICS 102a. Quantum Mechanics I

Nonrelativistic quantum theory and its application to simple systems; the harmonic oscillator, the hydrogen atom. Perturbation theory.

Mr. Grisaru

PHYSICS 102b. Quantum Mechanics II

Systems of identical particles. Coupling of angular moments. Scattering theory. Time-dependent perturbation theory. Semi-classical analysis of interaction of atomic systems and electromagnetic waves.

Mr. Grisaru

PHYSICS 103a. Statistical Physics

Review of thermodynamics and probability theory. Statistical postulates and ensembles. Behavior of non-ideal gases. Correlation functions, fluctuation theorems, Weiner-Khinchine theorem, generalized Nyquist relations. Mean-field theories of phase transitions; effect of fluctuations, Ginzburg criterion.

Mr. Redfield

PHYSICS 104aR. Solid State Physics

The formal description of periodic systems. The vibrational and electronic properties of solids. Electron dynamics on the Fermi surface. The mean field theory of magnetic solids.

Mr. Odagaki

PHYSICS 107bR. Particle Physics

The phenomenology of elementary particles, strong, weak and electromagnetic interactions. Topics include properties of particles, kinematics and quantum mechanics of scattering and decay, phase space, quark model, unitarity symmetries and conservation laws.

Mr. Bensinger

*PHYSICS 108b. Introduction to Astrophysics

PHYSICS 109a. Advanced Laboratory I

Methods and techniques of experimental research.

Mr. Young

PHYSICS 109b. Advanced Laboratory II

Methods and techniques of experimental work.

Mr. Berko

*PHYSICS 110a. Mathematical Physics

PHYSICS 113a. First Year Tutorial

A review of physics from the most elementary topics to those treated in other first-year graduate courses. The environment of an oral qualifying examination is reproduced in the tutorial.

Mr. Sneddon

PHYSICS 113b. Second Year Tutorial

A continuation of Physics 113a.

Mr. Sneddon

*PHYSICS 137a. Science in the Second Half of the Nineteenth Century

PHYSICS 152bR. Biological Assembly

See Biophysics 152bR.

Mr. Caspar

PHYSICS 200a. General Relativity I

Introduction to current research and problems in gravitational physics. Physical and mathematical background will be provided as needed, but emphasis will be on recent literature. Active participation by students in discussing the latter will be expected.

Mr. Deser

***PHYSICS 200b. General Relativity II**

PHYSICS 202a. Advanced Quantum Mechanics

Formal theory of scattering. Many particle systems. Elements of second quantization.
Relativistic quantum mechanics. Klein-Gordon and Dirac equations. *Mr. Abbott*

PHYSICS 202b. Relativistic Quantum Field Theory

Mr. Abbott

***PHYSICS 204b. Advanced Solid State Physics**

PHYSICS 209a. Laboratory Seminar I

Analysis of some important recent experiments.

Mr. Sinclair

PHYSICS 209b. Laboratory Seminar II

Analysis of some important recent experiments.

Mr. Young

PHYSICS 210a and b. Theoretical Seminar I, II

Analysis of important recent developments in theoretical physics.

Mr. Schnitzer

PHYSICS 213a and b. Tutorial in Physics I, II

Staff

PHYSICS 240b. Seminar in Biophysical Research

See Biophysics 200b.

Mr. Caspar

***PHYSICS 311a. Advanced Topics in Mathematical Physics**

Research Courses

PHYSICS 405. Experimental Elementary Particle Physics

Mr. Poster

PHYSICS 406. Experimental Elementary Particle Physics

Mr. Bensinger

PHYSICS 407. Experimental Elementary Particle Physics

Mr. Kirsch

PHYSICS 408. Theoretical Elementary Particle Physics

Mr. Abbott

PHYSICS 409. Theoretical Elementary Particle Physics

Mr. Deser

PHYSICS 410. Theoretical Elementary Particle Physics

Mr. Grisaru

PHYSICS 411. Theoretical Elementary Particle Physics

Mr. Pendleton

PHYSICS 412. Theoretical Elementary Particle Physics

Mr. Schnitzer

PHYSICS 413. Theoretical Elementary Particle Physics

Mr. Schweber

PHYSICS 414. Experimental Solid State Physics

Mr. Berko

PHYSICS 415. Experimental Solid State Physics

Mr. Canter

PHYSICS 416. Experimental Solid State Physics

Mr. Heller

PHYSICS 417. Experimental Solid State Physics

Mr. Sneddon

PHYSICS 418. Experimental Solid State Physics

Mr. Gross

PHYSICS 419. Experimental Solid State Physics

Mr. Lange

PHYSICS 420. Experimental Solid State Physics

Mr. Odagaki

PHYSICS 421. Relativity

Mr. Deser

PHYSICS 422. Mathematical Physics

Mr. Grisaru

PHYSICS 423. Mathematical Physics

Mr. Schweber

PHYSICS 424. Mathematical Physics

Mr. Pendleton

PHYSICS 425. Statistical Physics

Mr. Gross

PHYSICS 426. Astrophysics

Mr. Goldstein

PHYSICS 427. Astrophysics

Mr. Roberts

PHYSICS 428. Astrophysics

Mr. Wardle

PHYSICS 429. Structural Biology

Mr. Caspar

PHYSICS 432. Experimental Atomic and Molecular Physics

Mr. Wellenstein

PHYSICS 433. Experimental Atomic Physics
PHYSICS 436. Biophysics
PHYSICS 437. Experimental Condensed Matter Physics
PHYSICS 438. Experimental Condensed Matter Physics

Mr. Sinclair
Mr. Redfield
Mr. Meyer
Mr. Young

POLITICS

Objectives

The graduate program in Politics, leading to the degree of Doctor of Philosophy, emphasizes comprehensive professional training by stressing both the fundamentals of the discipline grounded in the study of political thought and institutions and the requirements of method and analytical skills.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Normally, the student's undergraduate training must be in a field of social sciences to be considered for admission to this program. Applicants are expected to take the Graduate Record Examination.

Faculty

Professor Donald Hindley, *Chair*: Comparative politics; South East Asia; Latin American politics.

Professor Robert J. Art: International relations; American foreign policy.

Professor Marver H. Bernstein: American politics.

Professor Robert H. Binstock: American politics.

Professor Seyom Brown, *Graduate Director*: International relations; American foreign policy.

Professor Robert O. Keohane: International relations; Political economy.

Professor Roy C. Macridis: Comparative politics; Western Europe.

Professor Ruth S. Morgenthau: Comparative politics; Africa.

Professor Peter Woll: American politics; Administrative law.

Associate Professor Mark L. Hulliung: Political theory.

Associate Professor Martin A. Levin: American politics; Urban politics.

Associate Professor Susan M. Okin: Political theory.

Assistant Professor Jeffrey Abramson: Political theory; Constitutional law.

Assistant Professor Steven Burg: Comparative politics; U.S.S.R.; Eastern Europe.

Assistant Professor Elliot Feldman: Comparative politics; Public policy.

Assistant Professor Thomas Ilgen: International relations; Political economy.

Assistant Professor Christopher Leman: American politics; Public policy.

Assistant Professor Ralph Thaxton: Comparative politics; Peasants and revolutions.

Lecturer with Rank of Assistant Professor B. Bernadyne Weatherford: American politics.

Degree Requirements

Master of Arts

No one will be accepted in the program who is not a doctoral candidate. However, the M.A. degree may be awarded upon satisfactory completion of one year of residence, the demonstra-

tion of proficiency in one foreign language, and the submission of an approved specimen of graduate-level scholarly writing to the department. In certain cases the department will counsel the student to complete his or her graduate studies program with a terminal M.A.

Doctor of Philosophy

Students should note certain special features of the program, in particular, (a) instruction in small seminars under close faculty supervision, (b) supervised independent study facilities within the department, (c) supervised teaching assistantships, (d) opportunities for study in the consortium of universities in the Boston area, and (e) the opportunity to incorporate work in related and relevant fields, e.g. economics, anthropology, philosophy. Each student is assigned to a departmental adviser who will help plan a professional and pertinent program of study. A continuity of faculty direction is insured throughout the program with allowance for shifts in curricular interest.

Program of Study. The student must complete two years in residence and a minimum of twelve semester courses. Students with an M.A. in political science from other institutions may petition at the end of one year to have their previous graduate courses accepted for Brandeis credit; this may relieve them of as much as a year of residence requirement. (However, they must satisfy all Brandeis requirements: distribution of curriculum, language, etc.) For distribution, each graduate student will be required to take three of the following fields: American Government, Comparative Government, International Relations, Political Theory and/or Methods, or two of the above plus a category of study at the graduate level in another department of the University, as shall be judged valid for the student's program by this department. (See below for a further clarification of the fields of distribution.)

Within each of the three fields chosen, graduate students will normally take at least *two* semester courses. The standard work load for full-time students is at least three courses in each semester of their first two years of study. Fourth courses and audits are encouraged, but the load is deliberately set so that the student may supplement his or her regular course work with independently motivated reading and scholarship. Reading courses will not be offered to first-semester students and will be generally discouraged during the first year. By the end of the first year, students should have identified their major and at least one of their minor fields of interest, and should make this known to their adviser and the Graduate Studies Chairman. (In the case of entering M.A.'s, a complete program should be worked out by the end of the first semester.)

Language Requirements. By the end of the first year of study, the student is expected to demonstrate proficiency in one approved foreign language. (Quantitative methods may be offered in lieu of one of the foreign languages but *not* for purposes of obtaining the M.A. degree.) Proficiency in two foreign languages must be demonstrated prior to admission to Ph.D. candidacy. Language proficiency must be demonstrated at Brandeis and certified by the department. Foreign language courses may not be counted for academic credit.

Evaluation of First Year. At the end of each student's first year in the graduate program, there will be a consultation between the student and at least two members of the department to evaluate the student's academic progress, and to help plan the student's subsequent work.

Research Paper. Each second-year graduate student is required to submit a high-quality research paper, which must be approved in its final version by two members of the department (appointed by the graduate adviser in consultation with the student) before the student will be allowed to take the comprehensive Ph.D. qualifying examinations.

Candidacy for the Ph.D. A student may be admitted to candidacy for the Ph.D. degree upon completing the course and research paper requirements, passing the qualifying examination,

fulfilling the language requirement and obtaining departmental approval of the subject and preliminary precis of the dissertation.

Normally at the end of the fourth semester or early in the fifth, a formal oral and written examination for candidacy for the Ph.D. will be given covering the student's three fields but with emphasis on the sub-fields in which the student has done the most work. Each of the examinations is individual: it responds to the approved program of the student. The written examinations may be taken, upon arrangement, within any four-month period. The orals are taken no later than two weeks after the last written examination. Students are examined orally in their three fields simultaneously.

However, each student must complete the Ph.D. qualifying examinations by the end of his/her fifth semester in the program, and must submit a dissertation prospectus by the end of the sixth semester. Any extension must be specifically granted by the Graduate Committee.

Dissertation and Defense. The dissertation will be completed under the supervision of the appropriate member of the departmental faculty. It must be sponsored by a departmental committee of at least two members and have the approval of the graduate committee of the department. It is assumed that the writing of the dissertation will take at least one year and, barring exceptional circumstances, not more than two and one-half years. The student must successfully defend the dissertation at a final oral examination conducted by his two departmental supervisors and another professor from outside the department or from another university.

Teaching Assistantships. As determined by funds and undergraduate enrollments, the department compensates students for teaching assistant work in an amount customarily based on need. First-year students do not normally receive teaching assistantships. It is the policy of the department that teaching experience is a normal and necessary part of the graduate training program and that ideally all students should have this opportunity regardless of compensation.

Fields and Sub-Fields. As stated above, curricular distribution is based on four major fields. Within the broad range of American Government, special concentrations may be achieved in such areas as urban studies, public administration and policy, institutions of government, parties and pressure groups, constitutional law. The student specializing in Comparative Government should have command of the important theories and theoretical techniques, and cluster of institutions or processes, such as development, political economy, or parties and bureaucracies, as well as familiarity with a designated geographical area. In International Politics, the student also needs a broad mastery of the principal theories, together with a specialization in such topics as international sub-systems, diplomatic history, security policy, political economy, comparative foreign policy, or American foreign policy, etc. In Theory and/or Methods, the student should be closely familiar with a major section of the history of political thought (ancient or modern) and the theories therein presented and developed, or may place primary emphasis on the so-called "scope methods of modern political science." This latter category implies not just the knowledge of quantitative techniques but an ability to criticize their application and a general grasp of the intellectual climate in which the philosophy of social science has developed.

The possibility of particular concentrations and emphases within the four major fields above will, of course, vary with the course offerings and the supervisory capacities of the departmental faculty.

Courses of Instruction

Courses and Seminars for Graduate Students

POLITICS 203a. Seminar: Comparative Politics

An examination of the approaches, concepts and theories of the field of comparative politics. *Mr. Macridis and Ms. Morgenthau*

POLITICS 204b. Seminar: International Politics

An examination of the approaches, concepts and theories of the field of international politics. *Mr. Keohane*

***POLITICS 205a. Seminar: American Politics**

POLITICS 206bR. Seminar: Political Theory

An examination of the approaches and concepts in the field of political theory.

Mr. Hulliung

POLITICS 248b. Political Institutions

This seminar-course will introduce the student to structural-functional analysis and processes of institutionalization. Major political structures — parties, executives, bureaucracies and legislatures — will be studied comparatively in democratic and, occasionally, totalitarian regimes. *Mr. Macridis*

***POLITICS 251b. Politics and Development**

***POLITICS 254a. The Politics of Food Security**

***POLITICS 256b. European Political Systems**

***POLITICS 270b. The Third World in the Global Economy**

POLITICS 297a. Section I. Science, Technology and Politics

This course examines the domestic and international politics of constructing sound public policy to encourage advances in science and technology, and to manage the consequences of those advances. Issues of concern will include the peaceful use of nuclear power, the regulation of toxic chemicals and the development of recombinant DNA technology. *Mr. Ilgen*

POLITICS 297a. Section II. International Political Economy

Analysis of intersection of the world economy and the international political system. Emphasis on theoretical approaches and historical analysis of the period since the industrial revolution. A basic working knowledge of economics, and a background in the study of world politics, are necessary. *Mr. Keohane*

POLITICS 297a. Section III. Comparative Political Ideologies

An examination of selected political theories and theorists and the translation of theories into political movements. Emphasis will be placed on the latter with reference to liberal, Marxist and conservative parties in the 19th and 20th centuries. Students will be asked to make presentations dealing with aspects of such movements. *Mr. Macridis*

POLITICS 297b. Section I. Topics in Law and Political Theory: Church and State in America

This course will deal with contemporary issues in separation of church and state as reflected both in decisions of the Supreme Court and in works of political philosophy. *Mr. Abramson*

POLITICS 297b. Section II. Justice and International Relations

This seminar, taught jointly by professors specializing respectively in international relations and political theory, examines the application of normative political theory to international relations. Topics include human rights, the principles of sovereignty and

intervention, ethics and war, and Third World demands for a New International Economic Order and the issues of distributive justice raised by them.

Mr. Brown and Ms. Okin

POLITICS 297b. Section III. Authoritarian Regimes

Advanced seminar for juniors, seniors and graduate students. Comparison of authoritarian regimes. Class discussion of theoretical and empirical studies of political phenomena (such as state structure, patterns of authority, popular participation, party systems and interest articulation) and specific countries. Emphasis on distinguishing authoritarian from totalitarian and democratic systems, and the process of transition from one to another.

Messrs. Burg and Macridis

POLITICS 297b. Section IV. Constitutional Law

An advanced research seminar on selected issues of constitutional law.

Mr. Woll

POLITICS 297b. Section V. Criminal Justice: The Rights of Defendants

A seminar focusing on the rights of criminal defendants through a study of the U.S. Supreme Court decisions interpreting pertinent constitutional provisions, and through selected research materials on state applications of those decisions.

Ms. Weatherford

POLITICS 301-319a and b. Readings in Politics

301a and b. <i>Mr. Binstock</i>	309a and b. <i>Mr. Art</i>	315a and b. <i>Mr. Feldman</i>
302a and b. <i>Mr. Brown</i>	310a and b. <i>Mr. Hulliung</i>	316a and b. <i>Mr. Ilgen</i>
303a and b. <i>Mr. Hindley</i>	311a and b. <i>Mr. Levin</i>	317a and b. <i>Mr. Leman</i>
305a and b. <i>Mr. Macridis</i>	312a and b. <i>Mr. Keohane</i>	318a and b. <i>Ms. Okin</i>
306a and b. <i>Ms. Morgenthau</i>	313a and b. <i>Mr. Abramson</i>	319a and b. <i>Mr. Thaxton</i>
308a and b. <i>Mr. Woll</i>	314a and b. <i>Mr. Burg</i>	

POLITICS 401-413. Dissertation Research

Independent research for the Ph.D. degree

401. <i>Mr. Binstock</i>	406. <i>Ms. Morgenthau</i>	411. <i>Mr. Levin</i>
402. <i>Mr. Brown</i>	408. <i>Mr. Woll</i>	412. <i>Mr. Keohane</i>
403. <i>Mr. Hindley</i>	409. <i>Mr. Art</i>	413. <i>Ms. Okin</i>
405. <i>Mr. Macridis</i>	410. <i>Mr. Hulliung</i>	

In addition, the following advanced undergraduate courses may be taken for graduate credit.

POLITICS 105a. American State and Local Government	<i>Ms. Weatherford</i>
POLITICS 111a. The American Congress	<i>Mr. Woll</i>
POLITICS 113b. The American Presidency	<i>Ms. Weatherford</i>
POLITICS 115a. History of American Constitutional Law	<i>Mr. Abramson</i>
POLITICS 116b. Civil Liberties in America	<i>Mr. Abramson</i>
POLITICS 117a. Administrative Law	<i>Mr. Woll</i>
POLITICS 121b. Limits of the Market and Public Intervention	<i>Mr. Levin</i>
POLITICS 122b. Policy Analysis and Policy Implementation	<i>Mr. Levin</i>
POLITICS 125a. Political Development in the Black Community I	<i>Mr. Pouncy</i>
POLITICS 126a. Race and Ethnicity in American Politics	<i>Mr. Pouncy</i>
POLITICS 128aR. Contemporary Peasant Revolutions	<i>Mr. Thaxton</i>
POLITICS 129a. Communism in Eastern Europe	<i>Mr. Burg</i>
POLITICS 130bR. Soviet Domestic Politics	<i>Mr. Burg</i>
POLITICS 140aR. The Politics of Africa	<i>Ms. Morgenthau</i>
POLITICS 141a. National and International Politics of Southern Africa	<i>Ms. Morgenthau</i>

POLITICS 141bR. Africa in World Politics	<i>Mr. Nyangoni</i>
POLITICS 143b. Third World Countries and Soviet Developmental Strategies	<i>Mr. Pouncy</i>
POLITICS 144aR. Political Change in Latin America I	<i>Mr. Hindley</i>
POLITICS 147aR. Government and Politics of China	<i>Mr. Thaxton</i>
POLITICS 150a. Government and Politics of Southeast Asia	<i>Mr. Hindley</i>
POLITICS 156. European Political Systems	<i>Mr. Feldman</i>
POLITICS 161bR. The Causes and Prevention of War	<i>Mr. Brown</i>
POLITICS 163b. International Politics of Modern Capitalism	<i>Mr. Keohane</i>
POLITICS 166bR. Issues in International Political Economy	<i>Mr. Ilgen</i>
POLITICS 167b. Seminar on International Law	<i>To be announced</i>
POLITICS 168b. American Foreign Policy	<i>Mr. Brown</i>
POLITICS 173a. China in World Politics	<i>Mr. Thaxton</i>
POLITICS 174b. Problems of National Security	<i>Mr. Art</i>
POLITICS 182b. Political Thought From the Renaissance to the Modern Age	<i>Mr. Hulliung</i>
POLITICS 185a. Public Policy and Political Theory	<i>Mr. Feldman</i>
POLITICS 198bR. Romantic and Existentialist Political Thought	<i>Mr. Hulliung</i>

PSYCHOLOGY

Objectives

The graduate program in Psychology leads to the degree of Doctor of Philosophy. The goal of the program is to develop competent research psychologists and teachers who will become contributors to knowledge in psychology. Toward this end, an emphasis is placed on research activity, starting in the first semester of graduate study. The program of study reflects a belief that the student should develop an area of research specialization and also should be exposed to a range of topics in general psychology. Dissertation supervision is available in the following areas: Sensation, Perception, Memory, Learning, Thinking, Comparative, Developmental, Personality, Psychopathology, Social Psychology, Linguistics and Cognitive Science.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

An undergraduate major in psychology is not required. Students with inadequate preparation may make up their deficiencies during their first year, but without residence credit. Students are admitted on a competitive basis which includes evaluation of previous academic record, recommendations, results of the Graduate Record Examination (Aptitudes and Psychology Achievement Tests), and the Miller Analogies Test.

Faculty

Professor James R. Lackner, Chair and Director of Graduate Studies: Human experimental psychology. Psycholinguistics.

Professor Ray S. Jackendoff, Chair, Program in Linguistics and Cognitive Science: Linguistics. Semantic theory. Music.

Professor Ricardo B. Morant: Experimental psychology. Perceptual mechanism. Sensation and perception.

Professor Zick Rubin: Social psychology. Interpersonal relationships.

Professor Arthur Wingfield: Human memory. Cognitive processes. Learning theory. Sensory physiology.

Associate Professor Maurice Hershenson: Perception. Developmental theory.

Associate Professor Raymond Knight: Clinical psychology. Experimental psychopathology.

Associate Professor Stephen Kosslyn: Cognitive science.

Associate Professor Joan Maling: Linguistics. Syntactic theory. Historical syntax. Metrics.

Associate Professor Leslie A. McArthur: Social psychology. Interpersonal attraction.

Associate Professor Jerome Wodinsky: Comparative psychology. Learning theory. Sensory physiology.

Assistant Professor Teresa M. Amabile: Social psychology. Creativity.

Assistant Professor Joseph Cunningham: Developmental psychopathology.

Assistant Professor Jane B. Grimshaw: Linguistics. Language acquisition.

Assistant Professor Marjorie Lachman: Life-span development. Adult personality.

Assistant Professor James Todd: Layout and motion perception.

Assistant Professor Malcolm W. Watson: Development psychology.

Instructor Michael Berbaum: Group problem-solving and decision-making.

Degree Requirements

Doctor of Philosophy

Program of Study. Although there is a two-year minimum residency requirement, four years of full-time graduate study are usually required for the Ph.D. The student is expected to carry the equivalent of twelve credit units per semester during residency.

Research. Each student will devote one-quarter of his or her time to research the first semester of the entering year. For all subsequent semesters, students shall devote a minimum of one-half time to research.

Research Reports. Students will submit reports on their research for the preceding year, in journal form, in time to permit evaluation of the first project by the end of the third semester, and of the second project by the end of the fifth semester. In the event that a student's first-year research report is unsatisfactory, the student will be required to take a terminal master's degree completed not later than the end of the fourth semester of residence. Students who have satisfactorily completed the research requirements will be permitted to continue their work toward the doctorate with no formal requirement of a master's degree.

Course Requirements. Entering students shall take *two seminars* and Psychology 210a in the first semester of residence, one seminar and Psychology 210b in the second semester. After that they shall take two seminars per semester in the second year, and one each semester thereafter until admitted to candidacy for the doctorate. Course selection will not be restricted to the Psychology Department, but will be arranged by the student in consultation with the faculty adviser. Two of the courses that the student takes during his or her graduate training must be outside of the area of specialization.

Qualifying Examinations. In the early part of the fifth semester of residence, each student will be thoroughly examined in the historical, theoretical and empirical literature related to the student's area of specialization, broadly conceived. The chairman of the department, in consultation with the student and adviser, will appoint a three-member committee to administer the qualifying examination. The examination may be in either oral or written form. In the event that the student fails his or her qualifying examination, he or she will be awarded a terminal master's

degree on the basis of an adequate second-year research paper. A student may petition the department to take the examination a second time if necessary.

Breadth Requirement. All graduate students must demonstrate breadth in the field of psychology before being admitted to candidacy for the Ph.D. This breadth requirement may be fulfilled by demonstrating competence in at least five of the seven areas listed below. The requirements may be satisfied in any of three ways:

- a. By having completed an undergraduate course in that area,
- b. By completing an undergraduate course offered in that area at Brandeis,
- c. By successfully passing the equivalent of any undergraduate final examination for that course.
 1. History and Systems
 2. Physiological
 3. Perception
 4. Learning
 5. Abnormal
 6. Social
 7. Developmental

The other breadth requirement is the two *graduate* courses outside of the student's area that was noted above.

Language Requirement. There is no foreign language requirement.

Admission to Candidacy. A student may be admitted to candidacy for the doctorate upon fulfilling the above requirements.

Dissertation and Defense. Following the completion of all examinations, the student will prepare a prospectus of the proposed dissertation study in consultation with a faculty dissertation sponsor. The prospectus may be based on preliminary research conducted prior to the student's admission to candidacy for the doctorate. Upon approval by the faculty of the department, a dissertation committee of three or more members will be appointed by the department chair, including the dissertation sponsor as chair of the committee. The dissertation sponsor will be responsible for advising the student throughout the performance of his or her work, in consultation with the remaining members of the committee at appropriate times in the course of the work. From time to time, the committee will report the student's progress to the department faculty.

The dissertation should provide evidence of originality, scholarship and research ability. It should be a contribution to knowledge, ordinarily an experimental investigation, but not necessarily so. Upon submission to the chair of the department of a copy of the thesis, signed by all members of the thesis committee, and a successful defense of the thesis before all members of the department, the award of the Ph.D. will be recommended to the Faculty Council of the Graduate School.

Ph.D. in Psychology with Specialization in Linguistics and Cognitive Science

This program focuses on the development of formal theories of mental representation. It emphasizes the unity behind approaches to mind within cognitive psychology and linguistics, with attention to the important contributions of computer science and philosophy. Applicants should specifically mention an interest in this program.

The degree requirements are as given above, except in the following respects:

Course Requirements. Entering students shall take Psychology 208a in the first semester of residence; fourth semester students shall take Psychology 216b, in which they present their research. Selection of other courses will be arranged by the student in consultation with the faculty adviser.

Breadth Requirements. The areas in which a student must demonstrate competence are:

1. Two out of three
 - a. Syntax
 - b. Semantics
 - c. Phonology
2. Two out of three
 - a. Perception
 - b. Cognition
 - c. Cognitive Development
3. One out of three
 - a. Psycholinguistics
 - b. Language Acquisition
 - c. Neuropsychology
4. One out of three
 - a. Logic
 - b. Philosophy of Mind/ Language
 - c. Computer Science

Courses of Instruction

***PSYCHOLOGY 123a. Psychology of Pictorial Representation**

***PSYCHOLOGY 130bR. Adult Development and Aging**

***PSYCHOLOGY 131b. Social Development**

***PSYCHOLOGY 132bR. Cognitive Development**

***PSYCHOLOGY 133aR. Altruism and Prosocial Behavior**

***PSYCHOLOGY 134b. Perspectives on Parental Behavior**

PSYCHOLOGY 135bR. Seminar in Social Cognition

This course deals with research in impression formation and causal attribution. Causal attributions for one's own behavior as well as for other people's behavior will be treated. Determinants of impression formation and causal attribution to be covered include social information, attention, motives and individual differences.

Enrollment limited to 20.

Ms. McArthur

***PSYCHOLOGY 136a. Advanced Topics in Developmental Psychology**

PSYCHOLOGY 137b. Social Interaction

Study of interaction among humans chiefly from an experimental perspective. Such processes as social facilitation, imitation, conformity, cooperation and competition, bargaining, coalition formation, group problem-solving and group decision-making are examined. Models of interaction involving conflict are applied to the analysis of behavior in selected natural contexts.

Mr. Berbaum

***PSYCHOLOGY 138a. Seminar: Conceptions of Social Relationships**

***PSYCHOLOGY 139bR. Development of Play and Imagination**

This course deals with the development of representation, play and imagination from infancy to adulthood and with theories that explain the developmental sequence and

functions of play. The course will include a research practicum that will substitute for some class time. This practicum will give students an opportunity to learn to use naturalistic observation techniques in performing small research and training projects with preschool children. *Mr. Watson*

***PSYCHOLOGY 140b. Psychology and Social Policy**

PSYCHOLOGY 145b. Aging in a Changing World

Psychological issues related to the aging process are examined in a multidisciplinary perspective. Social, biological, political, economic and historical-cultural factors that affect and are affected by psychological aging are considered. *Ms. Lachman*

***PSYCHOLOGY 151a. Seminar in Mental Representation**

***PSYCHOLOGY 152a. Concept Structure and Development**

***PSYCHOLOGY 154aR. Human Memory**

***PSYCHOLOGY 155aR. Visual Space Perception**

PSYCHOLOGY 156bR. Perceptual Development

The seminar will examine recent theories and experimental studies designed to investigate the ontogenetic development of space and object perception and sensory-motor interaction.

Enrollment limited to 15.

Mr. Morant

PSYCHOLOGY 160b. Seminar on Sex Differences

This course will examine societal sex roles and lay beliefs about sex differences in light of evidence bearing on: 1) actual sex differences in ability and/or personality; 2) biological vs. social explanations for sex differences; 3) motivational and cognitive biases in the perception of group differences.

Enrollment limited to 20.

Ms. McArthur

PSYCHOLOGY 161a. Mental Health in the United States: Field Work I

This course, in conjunction with Psych. 161b, provides an intensive, supervised practicum experience in the provision of mental health services. Students pursue a program of reading and spend one day a week working in a clinical facility. Weekly class meetings are structured to provide opportunities for personal and professional growth through discussion of individual experiences in the clinical setting.

Enrollment limited to 20.

Mr. Cunningham

PSYCHOLOGY 161b. Mental Health in the United States: Field Work II

A continuation of Psych. 161a.

Enrollment limited to 20.

Mr. Cunningham

PSYCHOLOGY 162a. Psychosomatics

The objective of this course is to provide the student with an understanding of psychological and socio-cultural factors in physical illness. Following discussion of the concepts of stress and disease, the attempt to answer three questions will form the basis of the course: What are the psychophysiological mediators to alteration in body function? What psychobiological factors determine which particular organ system will be affected? What determines the stressfulness of a particular situation for a given individual?

Mr. Giddon

***PSYCHOLOGY 166b. Psychopathology and Cognition**

PSYCHOLOGY 167b. Schools of Psychotherapy

Theories and techniques of several schools of psychotherapy and behavior modification are considered. The theories of personality, methods of intervention, goals of therapy and relevant research will be emphasized.

Mr. Knight

***PSYCHOLOGY 168a. The Psychology of Creativity**

The purpose of this course will be 1) to explore the foundations of modern theory and research on creativity, and 2) to examine methods of stimulating creative thought and expression. The course material will include 1) psychodynamic, behavioristic, humanistic and social-psychological theories of creativity, 2) personality studies of creative individuals, 3) studies of creative environments, 4) methods of defining and assessing creativity, and 5) programs designed to increase both verbal and non-verbal creativity.

Enrollment limited to 20.

Ms. Amabile

***PSYCHOLOGY 169b. Disorders of Childhood**

***PSYCHOLOGY 171a. Biological Bases of Motivation**

PSYCHOLOGY 172aR. Temporal Patterning of Behavior

Seminar on problems of serial patterning in the perception and production of speech. Discussion of problems in the integration and execution of complex motor patterns.

Mr. Lackner

PSYCHOLOGY 173aR. Psycholinguistics

An introduction to modern psycholinguistics with an emphasis on speech comprehension and production. The question of critical periods for language acquisition and biological specialization for language behavior in man are also considered.

To be announced

***PSYCHOLOGY 175b. Recent Advances in Animal Behavior**

***PSYCHOLOGY 176b. Light, Color and Vision**

***PSYCHOLOGY 177a. Biological Basis of Behavior**

***PSYCHOLOGY 180b. Seminar: Writing and the Social Sciences**

***PSYCHOLOGY 193b. Tests and Measurements**

PSYCHOLOGY 194bR. Language and Mind

An examination of Noam Chomsky's approach to the theory of language, *concentrating on the notion of innate ability to learn human languages*. This course will discuss philosophical and psychological consequences of Chomsky's theory, discussing applications of his conceptual framework to the study of other human activities such as reasoning, perception, sensory-motor coordination and the understanding of music.

Messrs. Jackendoff and Lackner

PSYCHOLOGY 195aR. Psychological Theory

A survey of psychological theories including Associationism, Structuralism, Functionalism, Gestalt, Behaviorism, Psychoanalysis, and their modern derivatives. Emphasis is on the nature of explanation and the methods by which it is achieved

Mr. Hershenson

***PSYCHOLOGY 196a. Research Methods in Social Psychology**

***PSYCHOLOGY 197a. Language Acquisition and Development**

***PSYCHOLOGY 198b. The Language of Thought**

PSYCHOLOGY 199aR. Aphasia and Language Disorders: Introduction to Neuropsychology

This course is designed as an introduction to the field of neuropsychology. Topics will include the concepts of cerebral dominance and localization of function within the human brain, with special reference to language and related mental function. The aphasic syndromes will receive special attention, including their symptoms, progress, brain localization and concomitant cognitive disorders.

Mr. Wingfield

***PSYCHOLOGY 200a and b. Observation and Research Strategies in Psychology**

PSYCHOLOGY 204a. Research Methodology for Developmental and Social Psychology

Ms. Amabile, Mr. Berbaum, Mr. Cunningham,

Ms. Lachman, Ms. McArthur, Mr. Watson

***PSYCHOLOGY 205a. Seminar in Perceptual Development**

PSYCHOLOGY 206b. Computer Methods in Psychological Experimentation *Mr. Todd*

PSYCHOLOGY 207a. Seminar in Perception

A survey of information processing, approaches to perception, perceptual memory and recognition. *Mr. Hershenson*

PSYCHOLOGY 208a. Proseminar: Issues in Cognitive Science

Required of all incoming students in cognitive science, this seminar will discuss philosophical, empirical and methodological issues confronting science. Readings will be drawn from the literature in vision, linguistics, computer science and philosophy.

Mr. Jackendoff

PSYCHOLOGY 209aA. Seminar in Research Problems in Psychology

The seminar is designed for first-year graduate students in psychology and will emphasize discussion of contemporary research problems of particular interest to the faculty and students. *Messrs. Lackner and Morant*

PSYCHOLOGY 210a. Advanced Psychological Statistics

Probability and inferential statistics for experimental research. Probability, random variables, some important probability distributions, statistical inference, large-and small-sample tests of hypotheses concerning population means and variances.

Mr. Knight

PSYCHOLOGY 210b. Advanced Psychological Statistics

Topics to be covered will include: correlation and regression, introduction to matrix algebra, multiple regression, partial and multiple correlation, principles of experimental design, and analysis of variance.

Prerequisite: Psychology 210a or permission of the instructor.

Mr. Berbaum

***PSYCHOLOGY 211a. Seminar in Infant Development**

***PSYCHOLOGY 212a. Concepts and Methods of Psychophysiology**

***PSYCHOLOGY 216b. Research Seminar in Cognitive Sciences**

PSYCHOLOGY 220-237. Courses in Research

220a and b. Research in Spatial Orientation

Mr. Lackner

221a and b. Research in Semantics and Conceptual Structure

Mr. Jackendoff

222a and b. Research in Human Spatial Orientation

Mr. Morant

223a and b. Research in Social Psychology

Mr. Rubin

224a and b. Research in Speech Perception and Cognitive Processes

Mr. Wingfield

225a and b. Research in Visual Information Processing

Mr. Hershenson

226a and b. Research in Cognitive Processes and Psychopathology

Mr. Knight

227a and b. Research in Visual Cognition

Mr. Kosslyn

228a and b. Research in Syntax and Comparative Germanic

Ms. Maling

229a and b. Research in Person Perception

Ms. McArthur

230a and b. Research in Animal Behavior

Mr. Wodinsky

231a and b. Research in Social Psychology

Ms. Amabile

232a and b. Research in Developmental Psychopathology

Mr. Cunningham

233a and b. Research in Syntax and Language Learnability

Mr. Grimshaw

234a and b. Research in Life-span Development; Adult Personality

Ms. Lachman

235a and b. Research in Layout and Motion Perception

Mr. Todd

236a and b. Research in Developmental Psychology

Mr. Watson

237a and b. Research in Group Problem Solving and Decision-Making *Mr. Berbaum*

PSYCHOLOGY 250-263. Advanced Research Project

250a and b. <i>Mr. Lackner</i>	257a and b. <i>Mr. Wodinsky</i>
251a and b. <i>Mr. Morant</i>	258a and b. <i>Ms. Amabile</i>
252a and b. <i>Mr. Rubin</i>	259a and b. <i>Mr. Cunningham</i>
253a and b. <i>Mr. Wingfield</i>	260a and b. <i>Ms. Lachman</i>
254a and b. <i>Mr. Hershenson</i>	261a and b. <i>Mr. Todd</i>
255a and b. <i>Mr. Knight</i>	262a and b. <i>Mr. Watson</i>
256a and b. <i>Ms. McArthur</i>	263a and b. <i>Mr. Berbaum</i>

PSYCHOLOGY 280-293. Advanced Readings

280a and b. <i>Mr. Lackner</i>	287a and b. <i>Mr. Wodinsky</i>
281a and b. <i>Mr. Morant</i>	288a and b. <i>Ms. Amabile</i>
282a and b. <i>Mr. Rubin</i>	289a and b. <i>Mr. Cunningham</i>
283a and b. <i>Mr. Wingfield</i>	290a and b. <i>Ms. Lachman</i>
284a and b. <i>Mr. Hershenson</i>	291a and b. <i>Mr. Todd</i>
285a and b. <i>Mr. Knight</i>	292a and b. <i>Mr. Watson</i>
286a and b. <i>Ms. McArthur</i>	293a and b. <i>Mr. Berbaum</i>

***PSYCHOLOGY 300a. Issues in Social and Developmental Psychology**

PSYCHOLOGY 310b. Topics in Data Analysis for Social Scientists

Topics considered will be path analyses (causal modelings), distribution-free (non-parametric) methods, and models for the analysis of contingency tables (cross-tabulations).

Prerequisite: One graduate-level social statistics course.

Mr. Berbaum

PSYCHOLOGY 400-416. Dissertation Research

400. <i>Mr. Lackner</i>	409. <i>Ms. McArthur</i>
401. <i>Mr. Jackendoff</i>	410. <i>Mr. Wodinsky</i>
402. <i>Mr. Morant</i>	411. <i>Ms. Amabile</i>
403. <i>Mr. Rubin</i>	412. <i>Mr. Cunningham</i>
404. <i>Mr. Wingfield</i>	413. <i>Ms. Grimshaw</i>
405. <i>Mr. Hershenson</i>	414. <i>Ms. Lachman</i>
406. <i>Mr. Knight</i>	415. <i>Mr. Todd</i>
407. <i>Mr. Kosslyn</i>	416. <i>Mr. Watson</i>
408. <i>Ms. Maling</i>	

In addition, the following advanced undergraduate courses may be taken for graduate credit.

LINGUISTICS 100a. Introduction to Linguistics

A general introduction to linguistic theory and the principles of linguistic analysis. The central topic of the course is what speakers know about their language: syntax, semantics, and phonetics and phonology. In each area, students will construct detailed analyses of data from English and from other foreign languages, and examine their implications for a theory of languages. Additional topics such as historical linguistics and the psychological implications of linguistic theory will be covered as time allows.

Ms. Maling

LINGUISTICS 100aR. Introduction to Linguistics

See Linguistics 100a.

Ms. Yip

LINGUISTICS 110a. Phonological Theory

This course is an introduction to Generative Phonology, which is a theory of natural language sound systems. It begins with a review of articulatory phonetics, followed by distinctive feature theory and the concept of a "natural class." The central section covers morphology and the nature of morphophonetics and universal properties of the rules that relate morphophonemic and phonetic representations. The course ends with discussion of a special topic such as syllable structure or word-formation.

Prerequisite: Linguistics 100a.

Ms. Yip

LINGUISTICS 120b. Syntactic Theory

This course extends the syntactic framework developed in the introductory course through the study of such problems as the complement system and constraints on transformations, with emphasis on their relevance to universal grammar.

Prerequisite: Linguistics 100a.

Ms. Maling

LINGUISTICS 125bR. Advanced Syntactic Theory

Recent developments in syntax, including such topics as constraints on rules, trace theory, government and binding, and lexical-functional grammar.

Prerequisite: Linguistics 120b.

Mr. Jackendoff

LINGUISTICS 130aR. Semantics

This course explores the semantic structure of language in terms of current linguistic theory. Topics to be covered include the nature of semantic representation, functional structure, presupposition and reference.

Mr. Jackendoff

LINGUISTICS 140aR. History of the English Language

An examination of the structure of the English language at various stages in its development and of the processes of linguistic change relating these stages. No knowledge of linguistics assumed.

Ms. Maling

LINGUISTICS 150b. Introduction to Cognitive Science

The idea of "mental representation" is central to cognitive science, and this course explores this idea from a number of perspectives. Representations evoked during visual perception, during language comprehension and production, and during reasoning are examined, as are the nature of "concepts" and the role of genetic predisposition in mental representations. The methods of cognitive science are also reviewed, with an emphasis on the interdisciplinary nature of the field.

Mr. Kosslyn

RUSSIAN

See Joint Program of Literary Studies (page 83).

SOCIOLOGY

Objectives

The graduate program in Sociology is primarily a doctoral program and is designed for students who intend to devote themselves to teaching and research in sociology. The student may, by satisfying certain requirements, receive the M.A. degree. The general objective is to educate students in the major areas of sociology with specialization in several of them.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the Sociology Department.

In addition, all prospective students are encouraged to submit written material (papers, etc.) representative of their best work, which need not be, however, of a sociological nature.

Faculty

Professor Irving K. Zola, Chair: Sociology of health and illness. Deviance.

Professor Egon Bittner: Sociology of law. Social control.

Professor Ralph Miliband: Comparative social structures. Political sociology.

Professor Morris S. Schwartz: Social psychology. Social psychiatry.

Professor Maurice R. Stein: Communities. Culture, counseling, consciousness.

Professor Emeritus Kurt H. Wolff: Sociology theory. Sociology of knowledge. Phenomenology and sociology.

Associate Professor Gordon A. Fellman: Marx and Freud. Social class.

Associate Professor Charles S. Fisher: Technology and environment. Everyday life.

Associate Professor Gila J. Hayim: Sociological and psychological theory and critical theory. Criminology.

Associate Professor George W. Ross: Political sociology. Social theory.

Assistant Professor Asoka Bandarage: Third World development. Race and ethnic relations.

Assistant Professor Kathleen Barry: Feminist theory. Family. Sociology of education.

Assistant Professor Peter Conrad: Sociology of health and illness. Deviance.

Assistant Professor Karen E. Fields: Sociology of religion. Sociology of development.

Assistant Professor Paula M. Rayman: Urban and community sociology. Organizations and occupations.

Assistant Professor Shulamit Reinharz: Qualitative methodology. Social gerontology. Feminist research.

Degree Requirements

Doctor of Philosophy

Program of Study. Students entering the Ph.D. program in Sociology are expected to undertake a two-year program of course work, as a part of which they are obliged to take the departmental Pro-Seminar (Sociology 290). The initial program of studies will be arranged in consultation with the graduate student's adviser. Consideration will be given to graduate work done elsewhere but formal transfer credit will be assigned only after the successful completion of the first year of study.

Requirements for the M.A. An M.A. may be granted after the successful completion of eight courses, and submission of two substantial research papers to be approved by the Department.

Residence Requirements. The minimum residence for the degree of Doctor of Philosophy is two years. It is expected that the Ph.D. will be earned within five years.

Language Requirements. There is no foreign language requirement for the Ph.D. degree.

Qualifying Examinations. During a student's residency until the time of his or her formal admission to candidacy, the specific planning, evaluation and accreditation of his or her entire course of study will be in the hands of each student's Guidance-Accreditation Committee composed of three faculty members. Along with the student, this committee will lay out a general course of study designed to meet the interests and needs of the student. Upon completion of this course of study, the student will take an oral qualifying examination covering both general sociology and the areas of the student's special interests. It is assumed that students will fulfill their accreditation before the end of their third year of residence.

Admission to Candidacy. A student shall be eligible for admission to candidacy for the Ph.D. upon fulfillment of the residence requirements, passing the departmental qualifying examination, and submission of an acceptable dissertation proposal. The work on the doctoral dissertation will be supervised by a Dissertation Committee.

Dissertation and the Final Oral Examination. The Ph.D. dissertation may be accepted by the Department upon the recommendation of the Dissertation Committee. To be granted the degree, the student is required to defend the dissertation in a public Final Oral Examination.

Courses of Instruction

SOCIOLOGY 101a. American Society

A sociological review of the nature and origins of the contemporary American crisis of confidence. Particular emphasis will be given to the sociology of the American economy, polity and state, changing stratification patterns, schooling and socialization, ethnicity and sex role definitions. *Mr. Ross*

SOCIOLOGY 102a. Social Psychiatry

Training in peer counseling is offered through classes, supervised sessions with other students, and community work. Theory, social contexts and practice of re-evaluation counseling is stressed. Other social psychiatric approaches are also covered. Enrollment limited. *Mr. Stein*

SOCIOLOGY 102b. Social Psychiatry

Enrollment limited.

Prerequisite: Sociology 102a or equivalent.

Mr. Stein

SOCIOLOGY 103aR. The Sociology of Mental Illness and Health

This course will concern itself with various sociological and psychological perspectives on the causes, nature of, and treatment for mental illness. We will also focus on the ways in which mental health is conceptualized as an internal state and an interpersonal process, and on the suggested means through which it might be achieved. *Mr. Schwartz*

***SOCIOLOGY 104aR. Sociology of Education**

SOCIOLOGY 105a. Feminist Critique of Contemporary Social Institutions I

Study of the various issues addressed in feminist activism (i.e. family, childcare, reproductive rights, employment discrimination, social construction of sexuality and lesbian rights, sexual violence) as they form a critique of social and political institutions, analysis of the structural, ideological and psychological dimensions of sex oppression. *Ms. Barry*

***SOCIOLOGY 105b. Feminist Critique of Contemporary Social Institutions II**

***SOCIOLOGY 106b. Sociology of Literature**

SOCIOLOGY 107a. Issues in Social Psychology

This course covers the origins of social psychological theory as the study of interpersonal behavior. It contrasts sociological and psychological social psychology and examines current contributions to the discipline's content, methods and definition. *Ms. Reinharz*

***SOCIOLOGY 108b. Critiques of Contemporary Society**

SOCIOLOGY 109b. Black Intellectuals and the Crisis of the Twentieth Century

Considers major political writers and leaders in the United States, Africa and the Caribbean by passing in review the twentieth century as seen from the standpoint of their work. Includes DuBois, Garvey, Nkrumah, King, Rodney and others. *Ms. Fields*

***SOCIOLOGY 110b. Sociology of Knowledge**

***SOCIOLOGY 111a. Political Sociology**

SOCIOLOGY 112b. Social Class, Freedom and Equality

The concept of social class; its role in determining life changes, lifestyles, income, occupation and power; theories of class and inequality; selected social psychological aspects of social class and inequality; American class structure and dynamics; American social class and imperialism. *Mr. Fellman*

SOCIOLOGY 116b. Comparative Ethnic Relations

This course will examine selected issues in the origin and evolution of race and ethnic relations in the U.S. and several Third World countries from a historical and comparative perspective. A critical analysis of concepts (such as prejudice, exploitation), and alternative theories and strategies (such as assimilation, separatism), as well as their relevance to ethnic relations in the selected countries will be presented. *Ms. Bandarage*

***SOCIOLOGY 117a. Work and Society**

SOCIOLOGY 118a. American Jewish Life and Institutions

See NEJS 161a.

Mr. Sklare

***SOCIOLOGY 118b. Sociology of the American Jewish Community**

SOCIOLOGY 119a. Militarism, the Arms Race and American Society

The objective of the course is to increase comprehension of the consequences of militarism and the arms race for American society. Attention will be given to the post - World War II development of militarism and its relationship to American economic, political and social institutions including focus on issues of national security, nuclear proliferation and modern disarmament activity. *Ms. Rayman*

***SOCIOLOGY 119b. Social Change: The Nonviolent Movement**

***SOCIOLOGY 120aR. Sociology of Underdevelopment I**

***SOCIOLOGY 120b. Sociology of Underdevelopment II**

***SOCIOLOGY 121b. Sociology of Mass Culture**

SOCIOLOGY 122a. Sociology of Power

This course will discuss modern theories of power, notably those associated with pluralist, Marxist and elite theories of society and politics. Attention will be directed toward empirical evidence for and against such theories drawn from advanced industrial societies. *Mr. Ross*

SOCIOLOGY 126aR. Sociology of Deviance

An investigation of the sociological perspectives of deviance, focusing particular attention on definitional, sociopolitical and interactional aspects and societal response. Includes a review of theory and current research and discussions of various forms of non-criminological deviance and social control. *Mr. Conrad*

***SOCIOLOGY 126b. Planned Communities**

SOCIOLOGY 130a. The Family I

Family as a patriarchal institution and its relationship to other social institutions, cross-cultural analysis of family forms, practices and ideas, and their impact on the role and status of women. Critique of family through study of alternative life styles and family forms through analysis of the role of violence in the family. *Ms. Barry*

***SOCIOLOGY 130b. The Family II**

***SOCIOLOGY 132a. Urban Sociology**

***SOCIOLOGY 132b. Urban Field Studies**

***SOCIOLOGY 133b. Comparative Urban Cultures**

SOCIOLOGY 135a. Group Process

Interpretation of interpersonal behavior and group development, based in part on observation of the group itself. Readings will include material from psychology and social anthropology as well as sociology.

Enrollment limited to 12 students.

Section 1: Mr. Schwartz

Section 2: Mr. Fellman

Section 3: Ms. Reinharz

SOCIOLOGY 135b. Group Process — Advanced

A continuation of Soc. 135a.

Mr. Schwartz

***SOCIOLOGY 136a. Field Work in Institutions**

***SOCIOLOGY 136b. Field Work in Institutions**

SOCIOLOGY 141a. Marx and Freud

The course stresses Marxian and Freudian treatments of human nature, human potential, social stability, conflict, change, consciousness, social class and the relationship between family and social process. Topics of contemporary importance are reviewed in the light of both traditions. Attempts to combine the two approaches are examined. *Mr. Fellman*

SOCIOLOGY 141b. Advanced Seminar on Marx and Freud

Continuation of Sociology 141a on an advanced level, for more intensive study of the issues raised there.

Enrollment limited to 10 students.

Mr. Fellman

***SOCIOLOGY 143a. Studies in Social Interaction, The Self and Society**

***SOCIOLOGY 145aR. Sociology of Life Styles: Socialization and Social Class**

***SOCIOLOGY 147a. Social Psychology of Organizations and Groups**

***SOCIOLOGY 148a. Social Psychology of Consciousness I**

SOCIOLOGY 148b. Social Psychology of Consciousness II

This course will explore various senses of the self and of society as described in both contemporary and social psychology and traditional Eastern culture. Focus will be on knowing the world in terms of the self's relation to it as exemplified in sociological field work and in meditation. Analysis of parables as a mode of teaching these skills will be explored. *Messrs. Fisher and Stein*

***SOCIOLOGY 150a. Sociology of Revolutionary Change**

***SOCIOLOGY 150b. Sociology of Revolutionary Change**

***SOCIOLOGY 151a. Social Class in Rural and Urban Settings: Environmental Research**

***SOCIOLOGY 151bR. Environmental Research: Fieldwork in Social Settings**

SOCIOLOGY 155bR. Social Movement

This course will be conducted as a seminar focused on the case-study of social movements including the labor, women's and disarmament movements in the U.S. We will analyze their interaction and effect on American society.

Ms. Rayman

SOCIOLOGY 160a. Social Conflict and Its Control

This course is concerned with social conflict as it relates to class, race, ethnicity and gender; and with ways in which it is controlled, in society and by the state. Different theoretical constructs relating to social conflict will be considered with reference to contemporary societies, notably the United States and Western Europe; comparisons will be made with Soviet-type societies.

Mr. Miliband

***SOCIOLOGY 163b. Therapy and Punishment (Criminology II)**

SOCIOLOGY 164a. Existential Sociology

This course is an introduction to existential thought and its relation to the discipline of sociology. Existential evaluation of selected theories on human nature and interaction, individual freedom and social ethics, the genesis and fate of the modern human group, types of authority, etc. Readings include works by Sartre, Durkheim, Goffman, Nietzsche, Kierkegaard, Mead and Merleau-Ponty.

Ms. Hayim

SOCIOLOGY 165a. Sociology of Birth and Death

This course will explore the ways in which different societies shape the human experience of birth and death. It will focus on recent changes in the social settings and meanings of birth and death in advanced industrial societies. Topics to be covered include Eastern attitudes towards birth and death, the Holocaust and nuclear war, the social implications of medical technologies and the home birth and hospice movements.

Mr. Stein

SOCIOLOGY 167a. Comparative Social Structures: Advanced Capitalistic Societies

A comparative examination of the development of modern capitalistic political economies stressing the relationship between patterns of economic accumulation, conflict and/or consensus between major social forces and the forms of state activity. Focus will be on the post-World War II evolution of British, French and U.S. societies, more specifically on the construction of different socioeconomic treaties in the immediate post-war period, the functioning of the consumerist social order based on these treaties, and the disruption of this order in the late 1960s and 1970s.

Mr. Ross

***SOCIOLOGY 170b. Industrial Sociology**

SOCIOLOGY 171aR. Women in the Third World

This course will examine the position of Third World women in the U.S. and in Asia, Africa and Latin America from a historical and comparative perspective. The unity and diversity of the female experience will be examined in the context of socioeconomic transformations taking place in the Third World. Emphasis will also be placed on the goals and strategies of women's movements in the Third World and their differences from Western feminism.

Ms. Bandarage

SOCIOLOGY 172b. The Family in the United States

See American Studies 150b.

Mr. Fuchs

SOCIOLOGY 173b. Contemporary Social Problems

We will deal with a selected group of social problems among which will be a) the deterioration of the cities, b) the onslaught of information and misinformation, c) the trouble of consumerism, d) the burdens of racism and poverty, e) old age and social

isolation. The aim of this course is to enable and encourage students to approach existing and proposed institutional arrangements critically. *Mr. Bittner*

SOCIOLOGY 174b. Technology and the Environmental Crisis

Consideration of the changing character of contemporary technology in its own terms and as it affects both social structure and the environment. Cases may be drawn from the problems of industrial efficiency and pollution, mining the soil by agriculture, small scale or appropriate technology, waste disposal, the computer revolution, or the search for energy. *Mr. Fisher*

***SOCIOLOGY 175a. Theories of Social Change and Social Action**

SOCIOLOGY 176bR. Issues in Third World Development

This course will attempt to understand the nature of underdevelopment in the Third World by focusing on such issues as traditional culture, population increase and European colonialism. We will pay particular attention to the economic, political and cultural impact of the West and its implications for development in several Third World countries. Alternative theories and strategies of development will also be considered. *Ms. Bandarage*

***SOCIOLOGY 177b. Aging in Society**

***SOCIOLOGY 178a. Sociology of the Professions**

***SOCIOLOGY 180a. Social Organization and Marxist Politics**

SOCIOLOGY 181a. Methods of Social Research

This course is intended to give a broad introduction to the various techniques used in doing social research. Areas to be covered include library research, content analysis, historical and comparative analyses, participant observation, survey research. A research project will be assigned to gain firsthand experience in the practical aspects of survey research. *Ms. Bandarage*

SOCIOLOGY 185a and b. Research Methods and Statistics

See Social Welfare 4.01, 4.02.

To be announced

SOCIOLOGY 188bR. Sociology of Law

The legal order considered in a framework of cross-cultural and historical comparison. The role of the instruments of the law and of the administration of justice in contemporary society. *Mr. Bittner*

SOCIOLOGY 189b. Introduction to the History of Legal Thought

A review of the intellectual development of Western conceptions of legality and of legal practice, considered against the background of social change. Materials will be drawn from the history of Europe and the United States, from the late Middle Ages to the modern era. *Mr. Bittner*

SOCIOLOGY 190b. On the Caring of Caretaker Institutions

An analysis of the structural arrangements of medical practice and of medical settings. Problems of communication and role relationships among professions and between patients and medical personnel will be examined. The impact of structures and role relationships on quality and quantity of medical care and on use of resources will be analyzed. *Mr. Conrad*

SOCIOLOGY 191a. Health, Community, and Society

An exploration into interrelationships of the nature of society and societies on the existence and treatment of health and illness. Topics include: conceptions of health and illness, patient careers, and the place of social science in medicine. *Mr. Conrad*

***SOCIOLOGY 192b. Healing and Healers: Self Care/Self Help Movement**

***SOCIOLOGY 196b. Seminar: Writing and the Social Sciences**

SOCIOLOGY 200a. Classical Sociological Theory

Critical readings of the sociologies of Marx, Weber and Durkheim. *Mr. Bittner*

SOCIOLOGY 200b. Contemporary Social Thought

Examination of American and European social thought: system and conflict theory, symbolic interactionism, ethnomethodology and phenomenological sociology and critical theory. *Ms. Hayim*

***SOCIOLOGY 203a. Field Methods**

SOCIOLOGY 203b. Field Methods

The methodology of sociological field research in the qualitative research tradition. Readings will include theoretical statements as well as experiential accounts of researchers in the field. The course will include specific methods and procedures of data collection (participant observation, interviewing, collaborative research, systematic observation, oral history) and data analysis. *Ms. Reinharz*

***SOCIOLOGY 204a. Sociology and History**

SOCIOLOGY 205a. Sexual Stratification: Historical and Comparative Perspectives

This seminar seeks to develop historically and culturally specific conceptualizations of feminism. Sexual stratification in several "developed" and "underdeveloped" countries will be intensively examined in relation to class and ethnicity, the international political economy, etc. These case materials will help consider different structural pre-conditions for the emergence of feminism and the relevance of Western feminist theories and research methodologies elsewhere. *Ms. Bandarage*

***SOCIOLOGY 207aR. Feminist Theory**

SOCIOLOGY 208aR. Seminar in the Sociology of Organization: The Industrial Labor Process

A review of the organizations of industrial organization including management, union and relevant political institutions. The seminar will take an historical approach to organization issues with special attention to issues of women and work, unskilled workers and effects of organization models on participation and equality. *Ms. Rayman*

***SOCIOLOGY 209b. Class and Politics**

***SOCIOLOGY 210a. The Sociology of Development and Underdevelopment**

***SOCIOLOGY 211a. Research on Women and Society**

***SOCIOLOGY 214a. Topics in Social Psychology: Freud and the Freudian Tradition**

SOCIOLOGY 215a. The Sociology of State Action

An examination of theories and concepts which have been advanced to explain the dynamics of state action in different social and economic contexts, notably in such advanced capitalistic societies as the USA and in Soviet-type societies, notably in the USSR. Recent discussions of the degree to which the state acts independently of social and economic forces in society will be considered, as will concrete cases of state action. *Mr. Miliband*

SOCIOLOGY 216b. Topics in Social Theory

A study of some major texts and ideas of the sociologist-philosopher. *Mr. Wolff*

SOCIOLOGY 217a. Problems and Issues in the Sociology of Health and Illness

The aim of this course is to offer a socio-cultural-historical-political perspective on the study of problems of health and illness. We will accomplish this by examining some of the basic assumptions underlying the way we conceive of and study issues in health care.

Mr. Zola

***SOCIOLOGY 218a and b. Advanced Topics in Social Theory and Methods: Surrender and Catch — Experience and Inquiry Today**

***SOCIOLOGY 219a. Social Systems and Political Forms: Social Conflict and Its Management**

***SOCIOLOGY 219b. Advanced Topics in Political Sociology**

SOCIOLOGY 220b. Seminar on the Sociology of Politics

A review of the sociological literature on social movements and collective behavior with particular stress on empirical investigations of changing types of major social movements in industrial societies.

Mr. Ross

***SOCIOLOGY 221a. Advanced Topics in Sociological Theory: Sociology of Religion**

***SOCIOLOGY 221b. Topics in the Sociology of Religion**

SOCIOLOGY 226a. Theories in Social Psychology

An examination of some major theorists of self and society, social interaction, and interpersonal relations. Theorists considered will include Cooley, Mead, Sullivan, Goffman and Buber.

Mr. Schwartz

***SOCIOLOGY 227b. Group Process Seminar**

***SOCIOLOGY 228a. Themes in Sociological Theory — Phenomenology and Sociology: Alfred Schutz**

***SOCIOLOGY 228b. Themes in Sociological Theory**

SOCIOLOGY 230-252. Readings in Sociological Literature

230a and b. <i>Mr. Bittner</i>	243a and b. <i>Mr. Zola</i>
231a. <i>Mr. Miliband</i>	245a and b. <i>Mr. Conrad</i>
233a and b. <i>Mr. Fellman</i>	246a and b. <i>Ms. Hayim</i>
234b. <i>Mr. Fisher</i>	247a. <i>Ms. Barry</i>
238a and b. <i>Mr. Ross</i>	249a and b. <i>Ms. Reinharz</i>
239a and b. <i>Mr. Schwartz</i>	250b. <i>Ms. Fields</i>
240a and b. <i>Mr. Stein</i>	251a and b. <i>Ms. Rayman</i>
242b. <i>Mr. Wolff</i>	252a and b. <i>Ms. Bandarage</i>

SOCIOLOGY 290c. Pro-Seminar

A seminar meeting once a week in which faculty members introduce their interests and research. *Required of all first year graduate students.*

Mr. Zola

SOCIOLOGY 401-423. Dissertation Research

Independent research for the Ph.D. degree.

401. <i>Mr. Bittner</i>	410. <i>Mr. Ross</i>	418. <i>Ms. Hayim</i>
402. <i>Mr. Miliband</i>	411. <i>Mr. Schwartz</i>	419. <i>Ms. Barry</i>
404. <i>Mr. Fellman</i>	412. <i>Mr. Stein</i>	420. <i>Ms. Reinharz</i>
405. <i>Mr. Fisher</i>	414. <i>Mr. Wolff</i>	421. <i>Ms. Rayman</i>
407. <i>Mr. Hughes</i>	415. <i>Mr. Zola</i>	422. <i>Ms. Bandarage</i>
	417. <i>Ms. Fields</i>	423. <i>Mr. Conrad</i>

SPANISH

See Joint Program of Literary Studies (page 83).

THEATER ARTS

Objectives

The Master of Fine Arts Program in Theater Arts is designed both to train and to educate—to develop skilled craftsmen of knowledge and judgment about the art.

Professionally oriented training is offered in three theatrical disciplines: *Acting* (including an Acting/ Directing option), *Design/ Technical*, and *Dramatic Writing*.

The production program provides extensive practical experience for all students on and behind the stages of the three Spingold theaters, where the actors act, the directors direct, the designers design and construct, and the playwrights have the opportunity to see their accepted plays produced.

The Department of Theater Arts is a member of the League of Professional Theater Training Programs.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Please note, the GRE is not required for Theater Arts admission. Students apply for admission to one of the three disciplines and, in addition to the standard application procedures, Acting applicants are seen in an audition/interview, Design/Technical applicants attend an interview with portfolio evaluation, and Dramatic Writing applicants submit one or more original playscripts for evaluation.

Acting and Design/ Technical auditions/evaluations are held at Brandeis and, in conjunction with the League of Professional Theatre Training Programs, in Chicago, New York, New Orleans and San Francisco. Information about these auditions/evaluations will be furnished by the department *after* applications have been received, and materials from Dramatic Writing applicants will be reviewed *after* applications have been received.

Admission is granted for one academic year at a time. Students in residence must make formal application for readmission to the Graduate School by March 1 of their first year in residence.

Faculty

Professor Martin Halpern, Chair: Playwriting and theater history.

Professor Theodore Kazanoff: Acting and directing.

Professor James H. Clay: Directing and theater history.

Professor Charles W. Moore: Acting and directing.

Visiting Professor John Bush Jones: Dramatic theory, literature and criticism.

Associate Professor Sam Kirkpatrick: Scenic design.

Associate Professor Maureen Heneghan Tripp: Costume design.

Associate Professor Robert O. Moody: Scene painting.

Assistant Professor Donna Aronson: Voice and speech.

Lecturer Patton Campbell: Costume design and history.

Lecturer Mabel Haley: Costume rendering.

Lecturer Annie Thompson: Voice and speech.

Lecturer Kayla Kazahn Zalk: Movement.

Artist-in-Residence Daniel Gidron: Acting and directing.

Artist-in-Residence Barbara Harris: Lighting design.

Artist-in-Residence Theodore Janello: Technical direction.

Artist-in-Residence Denise Loewenguth: Costuming.

Artist-in-Residence Tina Rolff: Voice.

Degree Requirements

Master of Fine Arts

Residence Requirements. Acting: two years. Acting with Certification: three years. Design/Technical: three years. Dramatic Writing: two years. Dramatic Writing with Certification: three years.

Actors normally earn the M.F.A. degree in two years. A third-year program for actors, and an acting/directing option available to selected third-year actors, is by invitation from the faculty. Playwrights also normally earn the M.F.A. in two years. A third-year program for playwrights is offered to, at most, one playwright annually on invitation from the faculty. Students may elect to accept the invitation for a third year of study, or may decline and have the two-year M.F.A. conferred. Candidates who complete the third year are granted the M.F.A. with Certification.

Programs of Study

ACTING

The acting faculty provides close supervision of class and performance work for first-year actors; second-and-third year actors are the core of the acting company for mainstage and other production activities. The third year for actors may include an internship at a major theater company for one production during the academic year.

The Acting/ Directing Option exists for those actors who wish a program where directing is explored with minimal technical elements. These students receive a combination of acting and directing assignments in the third year.

All actors (with the exception of first year in the first half of the first term, who are barred from performance work) are required to audition for and play as cast in all major productions, unless excused by the chairman after consultation with the director.

Actors are required to serve on a crew for one major production each year (about sixty hours); normally this crew may not be for a play in which the student is also performing. There is no crew requirement for third-year students in the Acting/ Directing Option, but stage managing is recommended. Students are expected to help on crew whenever they have time, regardless of formal credit.

Required Courses First Year:

THEATER ARTS 201. Seminar in Dramatic Theory, Method, Literature

Mr. Jones

THEATER ARTS 203. Advanced Acting Studies: I

Includes a collaborative playmaking workshop utilizing improvisational and ensemble techniques; also includes a weekly scene workshop.

Messrs. Kazanoff, Gidron and Moore

THEATER ARTS 207. Movement for the Actor: I

Includes regular fencing classes.

Ms. Kazahn Zalk

THEATER ARTS 209. Voice/Speech Studies for the Actor: I

Includes regular classes in singing and Alexander Technique.

Ms. Aronson

THEATER ARTS 225. Production Laboratory: I

Mr. Janello

Required Courses Second Year:

THEATER ARTS 204. Advanced Acting Studies: II

Includes collaborative playmaking workshop utilizing improvisational and ensemble techniques; also includes a weekly scene workshop.

Messrs. Kazanoff, Gidron and Moore

THEATER ARTS 208. Movement for the Actor: II

Includes regular classes in fencing.

Ms. Kazahn Zalk

THEATER ARTS 210. Voice/Speech Studies for the Actor: II

Includes regular classes in singing and Alexander Technique.

Ms. Aronson

THEATER ARTS 226. Production Laboratory: II

Mr. Janello

Those students interested in the Acting/ Directing Option who receive faculty approval will also take:

THEATER ARTS 213. Directing

Permission of instructor required.

Mr. Moore

Required Courses Third Year:

THEATER ARTS 301. Advanced Acting Studies: III

Includes a weekly scene workshop.

Mr. Kazanoff

THEATER ARTS 302. Movement for the Actor: III

Includes regular classes in fencing.

To be announced

THEATER ARTS 303. Voice/Speech Studies for the Actor: III

Includes regular classes in singing and Alexander Technique.

Ms. Aronson

THEATER ARTS 304. Rehearsal and Performance

Mr. Kazanoff

THEATER ARTS 325. Production Laboratory: III

Mr. Janello

Those students taking the Acting/ Directing Option will take Theater Arts 301 and 304 and either 302 or 303. In addition, they will take:

THEATER ARTS 202. Seminar in Dramatic Structure

Mr. Jones

Students enrolled in the Acting/ Directing Option may, with the permission of the instructor, also take:

THEATER ARTS 180. Production Concepts

Mr. Clay

DESIGN-TECHNICAL

All major productions are designed by graduate students. Therefore, a student may be expected to be involved in a design capacity on at least three productions during each year. In addition, students will participate on various production crews as arranged in consultation with the faculty.

The graduate design thesis (Theater Arts 310) is the final project in the Design/Technical program. In some cases a student's mainstage design assignments in the second or third year may constitute part of the thesis project.

Required Courses First Year:

THEATER ARTS 201. Seminar in Dramatic Theory, Method, Literature

Mr. Jones

THEATER ARTS 211. Scenic Design: I	<i>Mr. Kirkpatrick</i>
THEATER ARTS 214. Costume Construction Laboratory fee: \$10.00	<i>Ms. Loewenguth</i>
THEATER ARTS 217. Costume Design	<i>Mr. Campbell</i>
THEATER ARTS 219. Lighting Design: I Laboratory fee: \$10.00.	<i>Ms. Harris</i>
THEATER ARTS 221. Sketching and Rendering: I <i>Section A: Costume Rendering</i> <i>Ms. Haley</i> <i>Section B: Set Rendering</i> <i>Mr. Moody</i>	
THEATER ARTS 222. Drafting Laboratory fee: \$20.00.	<i>Mr. Janello</i>
THEATER ARTS 223. Scenic Painting: I Laboratory fee: \$80.00.	<i>Mr. Moody</i>
THEATER ARTS 225. Production Laboratory: I	<i>Mr. Janello</i>
THEATER ARTS 230. Life Drawing: I Laboratory fee determined by enrollment.	<i>Mr. Moody</i>

Required Courses Second Year:

Students will take either (a) Costume Design II, Costume Construction II and Section A of Sketching and Rendering II, or (b) Scenic Painting II and Section B of Sketching and Rendering II. Faculty will determine which group of courses a student will take and, in rare instances, may recommend that a student take both groups. All students will take Lighting Design II, Stage Mechanics, Life Drawing II and Production Laboratory II.

THEATER ARTS 212. Scenic Design: II	<i>Mr. Kirkpatrick</i>
THEATER ARTS 218. Advanced Costume Design	<i>Mr. Campbell</i>
THEATER ARTS 220. Lighting Design: II Laboratory fee: \$20.00	<i>Ms. Harris</i>
THEATER ARTS 224. Stage Mechanics Laboratory fee \$10.00.	<i>Mr. Janello</i>
THEATER ARTS 226. Production Laboratory: II	<i>Mr. Janello</i>
THEATER ARTS 227. Sketching and Rendering: II <i>Section A: Costume Rendering</i> <i>Ms. Haley</i> <i>Section B: Set Rendering</i> <i>Mr. Moody</i>	
THEATER ARTS 228. Scenic Painting: II Laboratory fee: \$80.00.	<i>Mr. Moody</i>
THEATER ARTS 231. Life Drawing: II Laboratory fee determined by enrollment.	<i>Mr. Moody</i>
THEATER ARTS 232. Costume Construction: II	<i>Ms. Loewenguth</i>

Required Courses Third Year:

Students will take the group of courses (*a* or *b* above) they did not take in the second year; all of these courses are listed below. All students will enroll for an Independent Study and for a Thesis Project.

THEATER ARTS 212. Scenic Design: II	<i>Mr. Kirkpatrick</i>
THEATER ARTS 218. Costume Design: II	<i>Mr. Campbell</i>

THEATER ARTS 227. Sketching and Rendering: II

Section A: Costume Rendering Ms. Haley

Section B: Set Rendering Mr. Moody

THEATER ARTS 228. Scenic Painting: II

Mr. Moody

THEATER ARTS 232. Costume Construction

Ms. Haley

THEATER ARTS 300. Independent Study

Staff

THEATER ARTS 310. Thesis Projects

Full presentation of projected designs for the scenery, costumes and lighting for a specific play or opera, presented in portfolio form, with the emphasis dependent upon the student's major field or interest.

Staff

DRAMATIC WRITING

Dramatic writing students are required to serve on two crews each year (about 120 hours). They are also required to participate in the preparation of any studio, workshop or major production of their plays mounted during the time they are in residence, and this counts as one crew. In rare instances, acting in a major production may count as one crew.

Required Courses First Year:

THEATER ARTS 201. Seminar in Dramatic Theory, Method, Literature

Mr. Jones

THEATER ARTS 215. Workshop in Dramatic Writing: I

A double-credit course.

Mr. Halpern

THEATER ARTS 225. Production Laboratory: I

Mr. Janello

One elective course each semester.

Required Courses Second Year:

THEATER ARTS 202. Seminar in Dramatic Structure

Mr. Jones

THEATER ARTS 216. Workshop in Dramatic Writing: II

A double-credit course.

Mr. Halpern

THEATER ARTS 226. Production Laboratory: II

Mr. Janello

THEATER ARTS 310b. Thesis Projects

Mr. Halpern

One elective course in the first semester.

Required Courses Third Year:

THEATER ARTS 300. Independent Study

Staff

THEATER ARTS 315. Workshop in Dramatic Writing: III

A double-credit course.

Mr. Halpern

THEATER ARTS 325. Production Laboratory: III

Mr. Janello

One elective course each term.

University Organization

Board of Trustees

Under Massachusetts law, the 50-member Board of Trustees is the governing body of the University. There are also four faculty representatives and three student representatives to the Board who participate in Board meetings and have votes on the several committees. The Chairman of the Fellows, the President of the National Women's Committee, and the President of the Alumni Association serve *ex-officio*. Alumni elect annually an Alumni Term Trustee who serves as full voting Trustee for a five-year term.

The President

The President is the chief executive officer of the University. He is appointed by the Board of Trustees and is responsible for all University activities.

Chancellor Emeritus

Chancellor Emeritus of the University is an honorary title held by Brandeis' Founding President Abram L. Sachar, whose 20 years of experience is now utilized for the welfare of the University.

University Fellows

University Fellows comprise about 400 national leaders from a broad base of business, educational and public life who lend counsel, expertise and support to University development and planning programs.

The President's Council

President's Councilors are leading men and women throughout the country whose skills and experience are placed at the disposal of the Brandeis President in areas of their special competence.

Academic Deans

The Dean of the Faculty supervises academic policy, undergraduate and graduate curricula, the faculty and its departments of instruction.

The Dean of the College of Arts and Sciences assumes responsibility for many areas affecting the academic lives of undergraduates, including curriculum development, advisory services and the academic progress of students.

The Dean of the Graduate School of Arts and Sciences oversees the individualized programs of study for scholars, scientists and artists in 20 disciplines.

The Dean of the Florence Heller School for Advanced Studies in Social Welfare oversees the academic activities of the University's first and only professional school and its work in such areas as health, aging, income and employment, and minorities.

The Faculty Senate

The Faculty Senate, the elected representative body of the faculty, discusses such issues as academic freedom and responsibility, University policy, appointments, tenure, dismissal and salaries.

The Vice Presidents

The Vice President for Administrative Affairs is responsible for providing logistical and support services to the University community such as maintenance, construction and renovation of the physical facilities; security; personnel; purchasing and other services.

The Vice President and University Treasurer oversees Brandeis' complete financial structure, prepares financial condition statements for the President, Board of Trustees and related governing committees and serves as principal liaison with the banking and finance communities.

The Vice President for Development and University Relations is responsible for directing the institutional mission of the University — its educational objectives, programmatic research and capital requirements — and articulating its long and short range needs to the various constituencies.

The Vice President and University Secretary is responsible for the Office of Alumni Relations, the Rose Art Museum, Brandeis University Press, and several special University programs, as well as serving as secretary to the Board of Trustees and liaison to the National Women's Committee.

Alumni Relations

The Office of Alumni Relations, located in the Gryzmish Academic Center, directs and coordinates programs and publications for all Brandeis alumni, the National Alumni Association, regional Alumni Chapters and the Alumni Fund.

National Women's Committee

The National Women's Committee, now an organization of more than 65,000 members, has been a partner with the University since 1948. This volunteer organization gives its membership a wide range of educational offerings. These include unique study group programs with syllabi provided by Brandeis faculty; adult education seminars in local communities called "University on Wheels;" and special lectures by University speakers. The more than 125 chapters across the country are embassies of good will for the University. The central commitment of the Women's Committee, however, is to the Brandeis University libraries. Since it was founded by eight members in Boston, it has contributed 20 million dollars in support of the libraries.

The Graduate Council

The members of the Graduate Council of the Graduate School of Arts and Sciences are appointed annually by the President of the University. Members of the Graduate Council for 1982-83 are:

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** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

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** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

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 Ph.D., University of Illinois

* on Leave, Fall Term, 1982-83

** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

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Ph.D., University of Rochester

David M. Hoose, *Assistant Professor of Music*
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Ph.D., Harvard University

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Ph.D., Northwestern University

Louis Iandoli, *Lecturer with rank of Assistant Professor of French and Italian*
Ph.D., Yale University

****Kiyoshi Igusa**, *Associate Professor of Mathematics*
Ph.D., Princeton University

Thomas Ilgen, *Assistant Professor of Politics*
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* on Leave, Fall Term, 1982-83

** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

***Leon A. Jick**, *Helen and Irving Schneider Associate Professor of American Jewish Studies*
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Ph.D., Indiana University

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D. Phil., Oxford University

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Ph.D., Harvard University

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Marcel Kinsbourne, *Adjunct Professor of Psychology*
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National Diploma, London

Lawrence E. Kirsch, *Professor of Physics and Director, Feldberg Computer Center*
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Karen Wilk Klein, *Associate Professor of English*
Ph.D., Columbia University

*****James Kloppenberg**, *Assistant Professor of History*
Ph.D., Stanford University

Raymond Knight, *Associate Professor of Psychology*
Ph.D., University of Minnesota

Avraam-Makis Koen, *Instructor in Philosophy*
M.A., University of Chicago

*****Robert Lincoln Koff**, *Professor of Music and Artist-in-Residence*
M.Mus., Oberlin College

*****Stephen Kosslyn**, *Associate Professor of Cognitive Science*
Ph.D., Stanford University

Miroslav Krek, *Lecturer in Bibliography*
M.L.S., University of Chicago

Tzee-Char Kuo, *Visiting Professor of Mathematics*
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(Sydney University)

*****Kenneth Kustin**, *Professor of Chemistry*
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James R. Lackner, *Meshulam and Judith Riklis Professor of Psychology*
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*****Christopher Leman**, *Assistant Professor of Politics*

Ph.D., Harvard University

Michael L. Leshin, *Lecturer in Legal Studies*
J.D., Boston University

Denise Levertov, *Fannie Hurst Poet-in-Residence*

Israel Levin, *Joseph and Esther Foster Visiting Professor of Hebrew Literature*

Ph.D., The Hebrew University
(Tel Aviv University)

*****Martin A. Levin**, *Associate Professor of Politics*
Ph.D., Harvard University

Harold I. Levine, *Professor of Mathematics*
Ph.D., University of Chicago

****Jerome P. Levine**, *Professor of Mathematics*
Ph.D., Princeton University

Lawrence Levine, *Professor of Biochemistry (American Cancer Society Professorship)*
Sc.D., The Johns Hopkins University

Norman E. Levine, *Associate Professor of Physical Education*
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Henry Linschitz, *Helena Rubinstein Professor of Chemistry*
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Denise Loewenguth, *Artist-in-Residence (Theater Arts)*

* on Leave, Fall Term, 1982-83

** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

John M. Lowenstein, *Helena Rubinstein Professor of Biochemistry*
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Susan Lowey, *Professor of Biochemistry and Rosenstiel Basic Medical Sciences Research Center*
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James Luckett, *Assistant Professor of Economics*
Ph.D., Cornell University

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Ph.D., Harvard University

Robert J. Maeda, *Associate Professor of Fine Arts*
Ph.D., Harvard University

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Ph.D., Massachusetts Institute of Technology

Frank E. Manuel, *Alfred and Viola Hart University Professor*
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Ph.D., Yale University

Gloria Jane Mason, *Lecturer in English*
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* on Leave, Fall Term, 1982-83

** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

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Ph.D., Harvard University

Marvin Meyers, *Harry S. Truman Professor of American Civilization*
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****Ralph Miliband**, *Morris Hillquit Professor in Labor and Social Thought*
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* on Leave, Fall Term, 1982-83

** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

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Ph.D., Stanford University

****Marguerite S. Robinson**, *Professor of Anthropology*
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Tina Rolff, *Artist-in-Residence (Theater Arts)*

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Yann Roverch, *Lecturer in French*
Agrége, Ecole Normale Supérieure, Paris

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*****Lawrence M. Schwartz**, *Associate Professor of Physics*
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* on Leave, Fall Term, 1982-83

** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

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* on Leave, Fall Term, 1982-83

** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

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Saul Touster, *Joseph M. Proskauer Professor in Law and Social Welfare and Director, Legal Studies Program*
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Burton A. Weisbrod, *Jacob Ziskind Visiting Professor of Economics*
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David Wong, *Assistant Professor of Philosophy*
Ph.D., Princeton University

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Harry Zohn, *Professor of German*
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James A. Zotz, *Lecturer in Physical Education*
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** on Leave, Spring Term, 1982-83

*** on Leave, 1982-83

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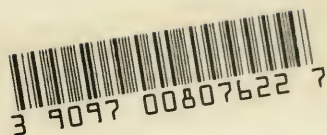
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Index

- Academic regulations, 20
- Academic schools and institutes, 29-31
 - Crown school of Graduate Studies in American Civilization, 29
 - Danielson School of Philosophy, Ethics and Religion, 29
 - Fierman School of Chemistry, 29
 - Fisher School of Physics, 30
 - Kutz School of Biology, 30
 - Lown School of Near Eastern and Judaic Studies, 30
 - Swig School of Political Science, 30
 - Tauber Institute, 31
- Acceptance, 15
- Admission, 14
- Alumni relations, 146
- Ancell, Nathan S., 31
- Application, 14, 18
- Assistantships, 28
- Auditing courses, 20
- Brandeis, Louis Dembitz, 2, 7
- Brandeis University, history of, 7
- Brown, Benjamin, Research Building, 11
- Calendar, academic, 4-5
- Center for Modern Jewish Studies, 30
- Chancellor Emeritus, office of, 145
- Correspondence directory, inside back cover
- Council, Graduate, 8, 146
- Course standards, 21
- Courses of instruction, 33
 - Anthropology, 33
 - Biochemistry, 40
 - Biology, 44
 - Biophysics, 51
 - Chemistry, 52
 - Classical and Oriental studies, 60
 - Comparative history, 65
 - Economics, 70
 - English and American literature, 73
 - French, 88
 - German, 89
 - History of American civilization, 79
 - Italian, 90
 - Jewish Communal Service, 108
 - Joint program of literary studies (comparative literature, French, German, Russian, Spanish), 83
 - Mathematics, 91
 - Music, 95
 - Near Eastern and Judaic studies, 100
 - Photobiology, 48
 - Physics, 113
 - Politics, 118
 - Psychology, 123
 - Russian, 90
 - Sociology, 131
 - Spanish, 90
 - Theater arts, 140
- Credit, *see* Grades, 21
- Credit from other institutions, 22
- Cross registration, at other institutions, 70
- Crown, Irving and Rose, 29
- Danielsen, Dr. Albert V., 29
- Deans, academic, 145
- Degree, requirements for, 17
- Dining facilities, 11
- Dismissal, 25
- Dissertations, 19
- Employment, students, 29
- Examinations, for admission, 14
- Final oral examinations, 19
 - Absence from, 21
 - see also* individual departmental requirements
- Faculty, arts and sciences, 152
- Faculty, emeriti/ae, 173
- Faculty Senate, 146
- Fees and expenses, 25
- Fellows, University, 145
- Fierman, Harold L., 29
- Financial Assistance, 27
 - Counselorships, 29
 - Fellowships, 28
 - Loans, 28
 - Research assistantships, 28
 - Scholarships, 28
 - Student employment, 29
 - Teaching assistantships, 28
- Fisher, Martin A., 30
- Foreign students, 16
- Golding Medical Outpatient Facility, 12
- Grades, 21
- Graduate Council, 146
- Graduate programs, areas of study, 9
- Graduate School, history and objectives, 8
- Graduate School Office, 11
- Health Policy Analysis and Research Center, 11
- Health services, 12
- Heller, Florence G., 11
- Heller, Florence, Graduate School for
 - Advanced Studies in Social Welfare, 10
- Hiatt, Jacob, Institute for Study in Israel, 12
- History of Brandeis University, 7
- Hornstein, Benjamin S., Program in Jewish Communal Service, 30, 108
- Housing, 11
- Incompletes, 21
- International Programs, office of, 12
- Kutz, Hattie and Milton, 30
- Leaves of absence, 24
- Levinson Policy Institute, 11
- Libraries, 9
- Loans, 28
- Lown, Philip W., 30
- Mailman House, 13
- National Women's Committee, 146
- Nondiscrimination policy statement, inside front cover

- Offices of the University, 148
- Officers of Instruction, 152
- President, office of, 145
- President's Council, 145
- Program, change of, 21
- Program of study, 20
- Psychological Counseling Center, 13
- Rabb Graduate Center, 11
- Readmission, 16
- Refunds, 27
- Registrations, 20,21
- Regulations, academic, 20-25
 - Auditing courses, 20
 - Course standards, 21
 - Credit, 22
 - Continuation, 24
 - Dismissal, 25
 - Exams, absences from, 21
 - Grades, 21
 - Incompletes, 21
 - Leaves of absence, 24
 - Program, change of, 21
 - Program of study, 20
 - Registration, 20
 - Withdrawal, 24
- Requirements for the degree, 17
 - Master of Arts, 17
 - Master of Fine Arts, 17
 - Director of Philosophy, 17
- Residence requirements, 22, 23
 - Full-time students, 23
 - Part-time students, 23
 - Post-resident students, 23
- Rosenstiel Basic Medical Sciences Research Center, 10
- Rosenstiel, Lewis S. and Dorothy, 10
- Sachar, Abram L., 2, 245
- Schools, academic, 29-31
- Special students, 24
- Stoneman Infirmary, 12
- Swig, Benjamin H., 30
- Tauber, Dr. Laszlo N., 31
- Testing, 14
- Trustees, Board of, 147
- Tuition, 25
- University organization, 145, 146
- Usdan Student Center, 11
- Withdrawal, 24

Correspondence Directory



Admission to Undergraduate College:
Dean of Admissions

Graduate School Admission and Financial Aid Information:
Dean, Graduate School of Arts and Sciences

Admission to the Heller School:
Dean, Florence Heller Graduate School
for Advanced Studies in Social Welfare

Scholarship Applications:
Director of Financial Aid

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